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ABSTRACT

This report provides an overview of educator supply and demand, educator under/oversupply, projected areas of greatest demand and need, and information regarding retirement of teachers in Illinois. Major findings include the following: there appears to be a sufficient number of qualified teachers, yet there are still a number of unfilled positions that vary dramatically among regions. The population of Illinois teachers is aging, and the projected number of teachers reaching retirement age is expected to double over the next 5 years. In terms of number of jobs, the top four projected areas of high demand in Chicago are self-contained classrooms, Title I remedial reading, learning disabled, and cross-categorical. The top five projected areas of high demand for downstate school districts are self-contained classrooms, learning disabled, behavior disordered, speech and language impaired, and physical education. When the reserve pool is taken into consideration, undersupply for specifically trained teachers exists in early childhood special education, gifted education, and languages other than English. An oversupply of educators exists in self-contained classrooms and social science. Appendices list educational personnel by main position, 1998-99 supply by teaching assignment, and 1998-99 supply and demand by teaching assignment. (DFR)

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Supply and Demand for Education Staff

Illinois State Board of Education
Research Division

December 1999

Ronald J. Gidwitz, Chairman
State Board of Education

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State Superintendent of Education

EA 030581

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Supply and Demand for Education Staff
Year One Report

Executive Summary

This study represents a synthesis of a variety of databases housed at the Illinois State Board of Education (ISBE) regarding education staff. The questions guiding this study may be found in the introduction. What follows are those findings most noteworthy.

- There is not a consensus as to whether a national shortage of teachers actually exists.
- As compared to approximately twenty years ago, the teaching force is older, more experienced, with fewer in the first year of teaching, and possesses more formal education. The fact that fewer of today's teachers are in their first year of teaching is especially troubling given that, by some estimates, 50 percent of new teachers leave the profession within the first five years.
- Economics plays a role in whether individuals certified to teach in areas of demand actually enter teaching. For example, Oklahoma has 700 certified math teachers who are not in the classroom, but are in the private sector (at approximately twice the starting salary of teachers).
- A number of limitations to this study are cited from time limitations, inconsistencies in the available data (e.g., position codes in one file not matching another) to the overlap of certificates making it impossible to do any analyses of supply by "type" of teacher.
- There were a total of 10,950 new teachers statewide last year, with 4,728 (43.0%) classified as "re-entries." For every ten new teachers hired in Chicago in 1998-99, five had previous teaching experience. For downstate, this statistic is four in ten for the 1998-99 school year
- Demand data was obtained from three data sources collected by the ISBE Research and Policy Division [Fall Housing Report, Teacher Service Record (TSR), Survey of Unfilled Positions]. For the first report, supply data was queried from the new Teacher Certification Information System (TCIS).
- Aggregate demand is defined as the total number of positions funded by school districts. Since not all funded positions are filled every year, demand is calculated by adding the total number of employed personnel to the number of unfilled positions. If *New Demand* is examined – the number of new teachers hired during the year (new positions) added to the number of unfilled positions – **Chicago has a higher new demand for personnel than do school districts downstate (12.8% versus 8.0% of total full-time personnel)**. With specific attention paid to positions of greatest new demand, **Chicago shows a higher percent of newly hired elementary teachers (self contained) and guidance counselors, whereas school districts downstate**

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show a relatively high new demand for special education teachers and psychologists.

- Findings regarding the supply of education staff must be viewed with caution. Supply is defined in this study as the number of individuals completing approved programs of teacher education (new supply) and the number of active certificates for individuals who are not currently working in education (reserve pool). When comparing new supply of teachers by subject area against new demand, the areas of under-supply are, by endorsement area, **self-contained classroom, bilingual, vocal music, early childhood special education and instrumental music**.

- When the reserve pool is taken into consideration, the picture shifts with regard to specifically trained teachers. The under-supply areas are: **early childhood special education, gifted education and other English**. An over-supply of educators exists in all other areas, but especially in the areas of **self-contained classroom and social science**, at least at the state level.

- In terms of the number of jobs, the top four projected areas of high demand in Chicago are **self-contained classroom, Title I remedial reading, learning disabled and cross-categorical**. The top five projected areas of high demand for downstate school districts are: **self-contained classroom, learning disabled, behavior disordered, speech and language impaired and physical education**.

- In terms of "greatest need," defined as the number of unfilled positions, the areas of highest need in Chicago were: **self-contained classroom, physical education, learning disabled and art**. Downstate districts had difficulty in filling positions in **speech and language impaired, other/general special education, behavioral disordered and cross-categorical**.

- There appears to be a sufficient number of qualified teachers, yet there is still an alarming number of unfilled positions which varies dramatically between regions. The question(s) remains: how do schools fill these voids? The bottom line – does it have a detrimental effect on student learning?

- Illinois is expected to experience a modest two percent increase in PreK-12 enrollment over the next three years.

- The population of Illinois teachers is aging. In 1993, there were 14,897 teachers in the "50-54" age group. In 1998, this number swelled to 24,262. The most significant change is in the 50+ group, which increased from 26.4 percent to 34.5 percent of the total workforce between 1993 and 1998.

- The projected number of teachers reaching retirement age is expected to double over the next five years. Currently, there are 10,147 full-time teachers that are over 55 years of age and that have 20 or more years of experience. That number is expected to balloon to 20,458 by the year 2004.

- Currently, 10.3 percent of those who are eligible to retire actually retire If this trend continues, the number of retirements will increase from 1,045 in 1999 to 2,107 in 2004. If the retirement rate increases an average of 1.2 percentage points a year (i.e., from

10.3% to 16.3%), the number of retirees will triple, from 1,045 to 3,053 in the next five years.

In closing, future plans include analyzing the data used in this study regarding average age of education staff and years of experience to determine if Illinois will suffer from the aging of its education staff (i.e., the retirement "bubble"), analyzing and determining trend information surrounding the attrition and retention of education staff by subject area, revising current data collection instruments in order to ensure consistency and compatibility and working with Illinois' neighboring states to begin a regional data collection effort around the issue of teacher supply and demand.

Foreword

This report is being submitted to fulfill the requirements of PA 91-102. This statute requires the Illinois State Board of Education to report, on or before January 1 each year to the Governor, the General Assembly and institutions of higher education on the relative supply and demand for education staff of the public schools.

This report provides an overview of the areas of educator supply, educator demand, educator under/over supply, projected areas of greatest demand and need (*the answers to the questions specified in statute*) and the information regarding retirement of teachers in Illinois.

Introduction

Throughout the nation there is a concern that public education will not have enough high-quality teachers to staff the classrooms of tomorrow. Arguably, attracting and retaining high-quality teachers is the most important challenge facing public education in the coming decade. A variety of statistics have been offered, widely publicized and strenuously argued regarding the demand for new teachers. The most recent statistic cited is that there will need to be two million new teachers hired over the next ten years. However, there is not total agreement that a shortage of teachers actually exists – some suggesting that a national shortage of teachers is a ploy to urge the federal government to spend billions more on education.

The face of teaching has changed over the last twenty years. In 1976, a teacher tended to be a white female with a bachelor's degree. The national teaching force had a median experience level of eight years and a median age of 33, with 5.5 percent of the force in their first year of teaching. Two decades later, a typical teacher is still a white female but now holds a master's or doctoral degree. Classroom teachers now have a median experience level of 15 years and a median age of 44, with 2.1 percent in their first year of teaching. Of particular importance is that the teaching force is now older, with more experience and with fewer recent college graduates. This is at a time when new teachers are leaving the profession at an alarming rate. Some estimates claim that up to 50 percent of first-timers leave teaching within the first five years.

To attract teachers to their classrooms, states across the country are becoming creative. Massachusetts, for example, offers a $20,000 signing bonus. Other states offer loan forgiveness packages. States and cities with large influxes of people (e.g., Texas, California, Las Vegas, Nevada) advertise nationally, offering attractive packages for teachers to come and work in their locale. Some states are offering these packages to teachers of neighboring states, snapping up new and experienced teachers to the detriment of their neighbors.

According to Bradley (1999), Connecticut, Minnesota, New York, Pennsylvania and Wisconsin produce more teachers than are hired by their schools, whereas California, Florida, Nevada and Texas generally are straining to hire teachers across the board. An under-supply of teachers is also noted for specific subject areas. In Oklahoma, for example, people certified to teach math (one of the highest demand fields nationally) are not working in schools. Oklahoma has more than 700 certified math teachers who are not teaching the subject. The reason given – starting teachers earn $24,060, while recent college graduates who majored in math can earn $40,000 to $50,000 in the computer field.

Closer to home, within a region comprised of Wisconsin, Illinois, Indiana, Michigan and Ohio, physics and technology education are in high demand, as are all the special education fields. Three of four elementary fields are reported as "some surplus," while home economics/family and consumer science are reported as shortage areas. Historically, math and science teachers have been in short supply, as have special education teachers.

Illinois has a long history of collecting information regarding currently employed teachers. Information is collected annually on certified personnel through the Teacher Service Record data collection effort. Until recently, data on the number of teachers entering into programs of teacher education, the number completing programs and the perceived shortage or surplus areas were also collected. These sources of information were then combined into a document describing the

supply of and demand for certified staff in Illinois and also used to identify shortage areas. However, institutions of higher education did not know about or did not use this information to inform entrance policies to schools and colleges of education.

Unfortunately, the Illinois State Board of Education (ISBE) did not have legislative authority to collect the information required for the supply-side analysis from institutions of higher education. Therefore, these self-reported data were sketchy, untimely or non-existent for certain years. More recently, the Illinois General Assembly empowered ISBE to collect information on the relative supply and demand of educators.

Senate Bill 556, passed in the spring of 1999 and enacted this summer (PA 91-102), requires that ISBE annually report on the relative supply and demand for education staff in public schools. As stated in the legislation, the report shall contain the following information:

1. The relative supply and demand for teachers, administrators and other certificated, and non-certificated personnel by field, content area and levels;

2. State and regional analyses of fields, content areas and levels with an over/under supply of educators; and

3. Projections of likely high/low demand for educators in a manner sufficient to advise the public, individuals and institutions regarding career opportunities in education.

The report that follows represents the first attempt to respond to the legislative requirements. Given the timeframe for submitting the report (bill signed at the end of July – report due by January 1, 2000), no new data collection efforts were implemented. This report is based on existing data collected by the Illinois State Board of Education.

Data Sources and First Year Limitations

DATA SOURCES

Demand data were obtained from three data sources collected by the ISBE Research and Policy Division [Fall Housing Report, Teacher Service Record (TSR), Survey of Unfilled Positions]. The past three years of data from the Fall Housing Report were used to calculate enrollment trends and projections at the state level. The total number of positions, by subject area and level, were calculated by adding the total number of teachers employed to the number of unfilled positions. These data were obtained from the Teacher Service Record (TSR) and the Survey of Unfilled Positions, respectively.

In subsequent years, the TSR terminations data will be used to examine other demand factors such as turnover, retention and mobility. Of particular interest is the aging teaching force and the retention percent of first-time teachers. Where possible, we will also look at the number of teachers that left Illinois to teach in another state and the number of public school teachers that transferred to private schools.

For the first report, supply data was queried from the new Teacher Certification Information System (TCIS). The total supply of teachers consists of: a) the current teaching force, b) the number of recent graduates, and c) an estimate of the "reserve pool." The current teaching force was obtained from the TSR data, and to provide more information, new teachers were broken down into two categories: "re-entries" and "first-timers."

FIRST YEAR LIMITATIONS

There were a number of factors that contributed to the limitations of this first report. These limitations are noted below:

- The law was passed in July, therefore, there was insufficient time to design and implement a study of this magnitude. For instance, there was not enough time to collect information from higher education institutions, or to do analyses of enrollment trends, attrition, retention and retirement phenomena.
- The inability to obtain the necessary and complete in-house data for previous years which would allow us to do projections or trends.
- Inconsistencies in available demand data. Education positions on the Unfilled Positions Survey do not match those on the Teacher Service Record.
- Supply data were not received until the last week in November leaving little time for analysis or verification.
- There is no meaningful way to determine "regional supply." We attempted to use the number of registered certificates in each region, but teachers can register in multiple regions or can get a new job and register that day. Also, a good number of certificates have not yet been put in to the new Teacher Certification Information System.
- Nearly fifty percent of the certificates issued do not have an endorsement attached, therefore, they cannot be linked to a specific subject area. Also, a single person can have multiple endorsements which will overestimate supply.
- Overlap of certificates makes it impossible to do any analyses of supply by "level." For example, an "03" certificate is good for grades K-9, while an "09" is good for grades 6-12. Either can be endorsed at the middle and/or junior high level (6-8). To further complicate matters, there is a type "10" which is good for grades K-12.
- We do not have data on teacher/student ratios by region or subject area to do projections" in a manner sufficient to advise the public, individuals and institutions regarding career opportunities in education."

Response to the Questions

Relative Supply and Demand

DEMAND

Aggregate demand is defined as the total number of positions funded by school districts. Since all funded positions are not filled every year, demand is calculated by adding the total number of employed personnel to the number of unfilled positions. The number employed was obtained from the 1998-99 Teacher Service Record (TSR) while the number of unfilled positions is from the 1998 Survey of Unfilled Positions.

The 1998-99 TSR database contains 148,136 records. Nearly all personnel employed were classified as full time (i.e. 141,778) which has been defined as: [*Months Employed* > 8 and *Percent Employed* > 99%]. For a detailed breakdown of full vs. part time personnel by position, see **Appendix A**. Since part time personnel make up a small percentage of the cases and are likely to have multiple assignments, they were excluded from this study. All subsequent analyses in this study will contain only full time personnel.

A breakdown of full time personnel by main position is shown in **Table 1**. In sum, there were 8,100 administrators, 121,179 instructors, 7,307 professional and 5,192 otherwise certified staff employed in the 1998-99 school year. One approach would be to add the 141,778 full time personnel to the 1937.9 unfilled positions reported in the 1998 Unfilled Positions Survey resulting in an aggregate demand of 143,715 (or 150,074 if including the part-timers). Demand in the aggregate, however, is of little use for planning and policy making.

Thus, to make the information more useful it was analyzed in two additional ways. First, *New Demand* was calculated – that is the number of new teachers hired this year added to the number of unfilled positions. Most people, including some "national experts," equate the term "new teachers" solely with first-year teachers.. However, there are two types of new teachers: "Beginners" (i.e. less than one year of teaching experience) and "Re-entries" (i.e., have previous teaching experience, but did not teach last year). As **Table 2** shows, there were a total of 10,950 new teachers last year. Of those, 43% (4,728) were "Re-entries." While the phenomena may vary widely between states, in Illinois "Re-entries" have made up 40% or more of the pool of new teachers for the last five years. The number of "Re-entries" is important because they represent a significant source of supply for needed teachers.

The second way an attempt was made to make the data more useful was to do separate demand analyses for Chicago and downstate. If you look in the last column in **Table 3**, you will see that the total New Demand Downstate was 9,541 or 8% of total downstate full time personnel (113,664). Also of interest is that the total number of new positions downstate consists of 41% "Re-entries" and 59% "Beginners." Thus, for every ten new teachers hired in 1998-99, four of them had prior teaching experience.

This is in sharp contrast to the data in **Table 4** which shows the new positions in Chicago are split 50/50 between "Beginners" and "Re-entries," and that the total New Demand, although smaller in number (3,304 vs. 9,541), constitutes a significantly higher percentage of their personnel (ie.12% vs. 8%). New Demand also varies significantly by position. For instance, Chicago shows relatively high demand for **elementary teachers and guidance counselors** (14% each), while downstate demand is more pronounced for **special education teachers (14%) and psychologists (15%)**.

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SUPPLY

The supply of public school teachers in any year is defined as the number of eligible individuals who are willing to work under the prevailing conditions. In economic terms, supply would include any qualified individual who: currently holds a teaching position, seeks to enter the profession or would enter the profession if a suitable position existed. Unfortunately, there is no known data source that would enable us to calculate supply from this definition! The number of "Beginners" could be used as an indicator of "people seeking to enter the profession," however, we only know how many successfully entered, not how many were actively seeking. Likewise, the number of "Re-entries" is a subset of the total number of people who attempted to enter the profession due to the opening of a suitable position.

On the other hand, what can be measured, with a moderate degree of precision, is: a) the current teaching force, b) the number of recent graduates, and c) an estimate of the "reserve pool."

The current teaching force was obtained from the TSR data and is shown in Tables 1, 2, 3 and 4 in various configurations (i.e., State, Downstate and Chicago full time totals). These numbers can be confusing because they represent both supply and demand, or more accurately – where supply and demand are equal. For the first report, plans were to derive the number of recent graduates and an estimate of the Reserve Pool from the new Teacher Certification Information System (TCIS). The supply data should be viewed as a first step in what has been a very difficult and confusing endeavor.

The number of new graduates was determined by the number of entitlement notifications reported between July 1, 1998 and June 30, 1999. In Illinois, there are 55 colleges that offer approved teacher education programs. When a student has met the requirements of an approved program, the institution notifies the State Board which teaching certificates and endorsements the student is entitled to receive. This information is collected annually so it is more efficient and accurate than sending another survey to the institutions. Another benefit of using Entitlements is that they include people who have completed an approved program, as well as previous graduates who have received additional credentials. Although it could not be done this year due to time constraints, next year a new component will be added: the number of new certificates issued (by area) for each fiscal year. By tracking these numbers, it should be possible to derive a more accurate measure of the Reserve Pool and determine attrition rates between entitlement and certification.

The Reserve Pool was defined as the number of active endorsements of educators who are currently not working. To limit the pool to candidates that were more likely to re-enter the workforce, the query was restricted to endorsements issued in the last 20 years (i.e., July 1979 to June 1999).

As noted in the Limitations section, there is an inordinate amount of overlap between certificates so it is impossible to conduct an analysis of supply by level. Thus, the decision was made to collapse the levels and use endorsement areas to identify the number of new graduates and to estimate the Reserve Pool by subject area. One caveat to add is that one person can have multiple endorsements, therefore, the number of entitlements and the Reserve Pool contain duplicate counts. In fact, an analysis of the first year of entitlements found there were 19,032 endorsements for 10,968 individuals (or an average of 1.7 per person). On the other hand, only 50% of issued certificates contain an endorsement. For a complete list of the certificates and endorsements tied to each teaching assignment, see **Appendix B**.

State and Regional Analyses of Over- and Under-Supply

In the past, issues of over- or under-supply were determined by comparing *New Supply* [new graduates + "Re-entries"] to *Total Demand* [first-timers + "Re-entries"]. This approach is problematic for a number of reasons. First of all, the potential supply is much larger than the sum of the current year's graduates and "Re-entries," The Reserve Pool also includes a good number of graduates from previous years that have never taught, as well as any "Re-entries" applicants that were not hired. Secondly, total demand should also include unfilled demand or the number of "unfilled positions." In fact, since they represent demand for which there was no supply (at the given price offered) unfilled positions are a good indicator of "under-supply," especially at the regional level.

As mentioned previously, the TCIS database was used to estimate *New Supply* [= the number of new graduates (i.e., using #-of entitlements)] by subject area. These were compared to *New Demand* [= first timers + unfilled positions] to determine areas of over- and under-supply at the state level. **Table 5** shows the subject areas rank ordered from the highest under-supply to the highest over-supply. According to this analysis, the greatest area of under-supply of new graduates is for **Self Contained classroom teachers (-695)**. This area also has the largest number of unfilled positions (545) which indicates a relatively high need. If one disregards areas for which we have no supply data (e.g., Cross Categorical; Other/General Special Ed.), the other highest under-supply areas are: **Bilingual (-175), Vocal Music (-90), Spec. Ed. Early Childhood (-71) and Instrumental Music (-67). Gifted education (-20) should also be considered due to the low number in the Reserve Pool (18)**.

For the second analysis, Total Demand was subtracted from the Reserve Pool to get a feel for the "big picture." In **Table 6,** the subject areas are rank-ordered from highest under-supply to highest over-supply using [Reserve Pool – Total Demand] to calculate relative supply. In this scenario, only ten areas show an under-supply. Of those, seven show low-supply because a viable estimate of the Reserve Pool is unavailable. Thus, according to this analysis, there are only three known areas of under-supply: **Special Education Early Childhood (-129), Gifted Education (-32) and Other English (-11)**. All of the other areas show a considerable over-supply. In fact, Self Contained classroom is the highest on the list with an over-supply of 95,079. Social Science is next with a surplus of 30,246.

As this last analysis indicates, if one takes the Reserve Pool into consideration, there are very few areas of under-supply in Illinois at the current time – at least at the state level. But it also raises an interesting question – if the Reserve Pool is so big, why are there so many unfilled positions? It could be argued that the Reserve Pool is over-estimated since people are likely to have endorsements in more than one area. But even if each educator held two endorsements, that argument is easily countered by the fact that the pool only represents 50% of the certificates issued (since half of them do not have endorsements). A more plausible explanation is that the unfilled positions represent jobs that qualified candidates are unwilling to take "given the prevailing conditions." Be it geographical, monetary or any one of a dozen other environmental variables (including hiring inefficiency) for some reason, 512 Self Contained classroom positions were not filled in Chicago and 135 Speech and Language Impaired positions were not filled downstate.

Projections of Likely High/Low Demand

The most commonly used technique for projecting demand is to multiply projected student enrollments by current (or extrapolated) teacher-pupil ratios. This method can only be used at the aggregate level in Illinois. Projections through the year 2002, based on enrollments for the 1998-99 school year, are shown below in **Table 7**. Over the three year period, an additional 2,324 teachers will be needed due to enrollment growth. The teacher-pupil ratios used were 1:19.6 (elementary) and 1:18.1 (high school).

Table 7: Additional Teachers Needed Due to Enrollment Growth

	Elementary		High School	
1998-99 State Enrollment	1,449,232		562,298	
	Enrollment Growth	**Additional Teachers Needed**	**Enrollment Growth**	**Additional Teachers Needed**
1999-00	10,262	524	7,433	411
2000-01	16,274	830	6,287	347
2001-02	3,876	198	245	14
Three Year Total [2,324]		**1,552**		**772**

Enrollment growth is only one part of the equation. In order to do accurate projections of need, we also need to know how much of the teaching force is retained from year to year. Or conversely, how many teachers leave (i.e., the attrition rate). The number needed due to attrition is then added to the number needed due to enrollment growth to project the total number of teachers needed in subsequent years.

Since attrition or retention data are unavailable, the best estimate of high demand in the near future is this year's high demand areas. High demand can be defined in two ways, first, by the sheer number of new jobs (New Demand), and second, by high need (i.e., Unfilled Positions). To determine the "high demand areas" by New Demand, the total number of new positions ("Re-entries" + "Beginners") were added to the number of Unfilled Positions. Separate analyses were then run for Chicago and downstate by main teaching assignment.

In Chicago, the ten biggest New Demand areas are:

Main Assignment (Chicago)	New Demand
Self Contained Classroom	1,373
Other Subject (not listed)	228
Title I Remedial Reading	154
Learning Disabled	140
Cross Categorical	115
Physical Education	107
Bilingual Education	96
English	86
Art	78
Other/General Special Ed.	50
Behavior Disordered	42

See **Table 8** for the complete list of New Demand by subject area for Chicago.

For areas in Illinois, other than Chicago, the ten biggest New Demand areas are:

Main Assignment (Downstate)	New Demand
Self Contained Classroom	2,349
Learning Disabled	545
Behavior Disordered	353
Speech and Language Impaired	342
Physical Education	339
English	318
Language Arts	307
Cross Categorical	301
Basic/General Math	261
Bilingual Education	249

See **Table 9** for the complete list of New Demand by subject area for downstate.

The Unfilled Positions Survey is one of the most important pieces of this study. In December of each year, districts report the number of positions that are still unfilled. These unfilled positions represent demand that is likely to go unfilled for the school year and thus, are a good indication of high need within a district. For a list of unfilled positions by subject area, see Tables 8 and 9 (Note: fields with "N/A" indicate areas not on the Unfilled Positions Survey).

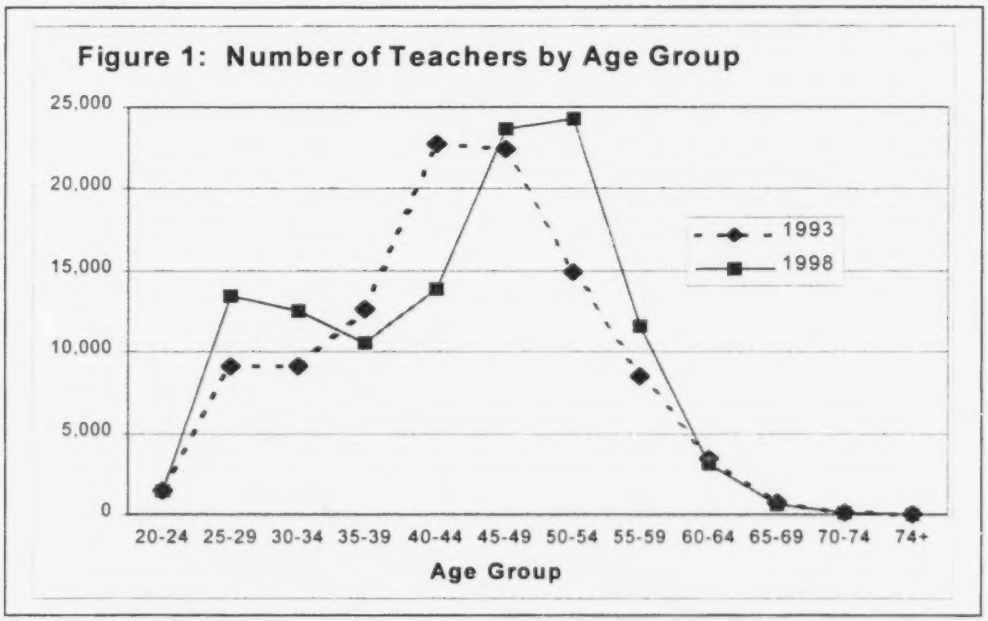
The top categories of unfilled positions for Chicago and downstate are listed below:

Main Assignment (Chicago)	Unfilled Positions
Self Contained Classroom	512
Physical Education	66
Learning Disabled	55
Art	48
Voc. Tech. Business, Mkt. & Mgt.	21
Basic/General Math	18
Behavior Disordered	17
English	17
Spec. Ed. Early Childhood	15
Educationally Handicapped	14

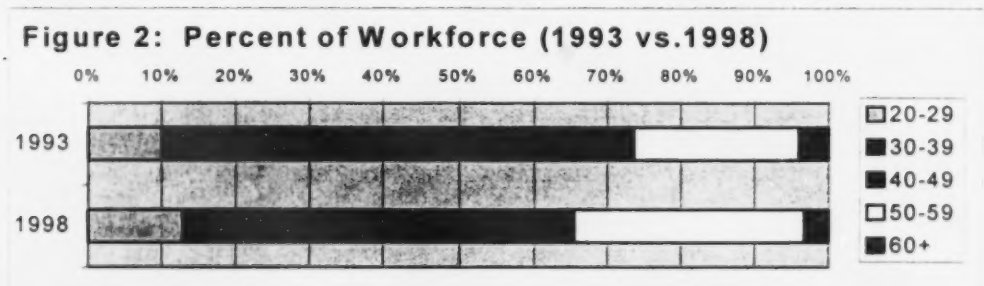
Main Assignment (Downstate)	Unfilled Positions
Speech and Language Impaired	135.4
Other/General Spec Ed.	115.1
Behavior Disordered	84.5
Cross Categorical	83.0
Physically Handicapped	48.0
Bilingual Education	34.5
Self Contained Classroom	31.0

Retirement

The population of Illinois teachers is aging. When compared to the 1993 workforce, the peak of the distribution has moved from the "40-44" age group to the "50-54" age group (see Figure 1). The graph also shows the greater number of teachers in the "25-29" and "30-34" age groups. While the total number of teachers age 55 or older has changed moderately since 1993 (i.e., from 12% of the workforce to 13%), the number of teachers in the "50-54" age group has changed dramatically. In 1993, there were 14,897 teachers in the "50-54" age group. In 1998, the number swelled to 24,262.



It is this group that will create the "retirement bubble" in the next five years. Figure 2 shows the composition of the workforce by 10-year age groups. The most significant change is in the 50+ age group which increased from 26.4% to 34.5% of the total workforce between 1993 and 1998.



Due to the aging of the Illinois workforce, the projected number of teachers reaching retirement age is expected to double over the next five years. Currently, there are 10,147 full time teachers that are over 55 years of age and that have 20 or more years of experience. That number is

expected to balloon to 20,458 by the year 2004. If the percent who actually retire remains constant, the estimated number of retirements will also double in the next five years. For example, over the last two years, 10.3% of those eligible have actually retired. If this trend continues, the number of retirements should increase from 1,045 in 1999, to 2,107 in 2004 (see Table 10).

Table 10. Projected Number of Teachers Eligible to Retire

	# Eligible to Retire	Estimated Retirements
1999	10,147	1,045
2000	11,790	1,214
2001	14,013	1,443
2002	16,461	1,696
2003	18,510	1,907
2004	20,458	2,107

Eligible = 55+ years old AND 20+ years experience.
Estimated Retirements = 10.3% of Eligible (based on the last two years data)

Things are unlikely to remain constant, however. Since the teaching force is aging, it is more likely that an increasing percent of those eligible will actually retire. If the percent of the eligible that actually retires increases an average of 1.2% a year (i.e. from 10.3% to 16.3%), the number of retirees will triple, from 1,045 to 3,053, in the next five years.

Other policy decisions, such as early retirement incentives, will have a significant impact on the percentage of those eligible who actually retire. When the Early Retirement Option was first offered in 1993-94, 6,690, or 66.2% of those eligible retired! It would be prudent to assume that at least 50% of those eligible will retire if it is offered again.

Future Plans

At the state level, trends of over- and under-supply will be tracked to project areas of high and low demand. Regional trends regarding enrollments, turnover and retention will also be reported. Plans also call for an analysis of average age and years of experience to determine if Illinois will be affected by a "retirement bubble" (i.e., a large cohort of educators reaching retirement age in the next 5-10 years).

A teacher supply-demand projection model consists of three main components or sub-models: 1) demand for teachers, 2) the supply of teachers retained from year-to-year (or conversely, a model of teacher attrition), and 3) the supply of entrants into the teaching force. Specifics regarding each component follow.

Teacher Demand. The most commonly used technique for projecting demand is to multiply projected student enrollments by current (or extrapolated) teacher-pupil ratios. This method could be used in Illinois, but only at the aggregate level. To be of real use in policy making, data such as district teacher-pupil ratios by subject and/or grade level, need to be collected.

Teacher Retention and Attrition. The primary source of teacher supply is last year's teaching force. Nationally, between 92 and 96 percent of a state's teachers return the following year. The projected number of teachers retained, equals the current year's teaching force, multiplied by the retention rate for the same year. Once the number-retained is known, it is subtracted it from projected demand to obtain the number of new teachers that need to be hired. To make better predictions, ISBE staff will analyze and determine trends on attrition and retention by subject area, in the near future.

Entering Teachers. There are four sources of supply for potential entrants: the reserve pool, recent graduates, out-of state teachers and private school teachers. As stated above, subtracting the projected number of retained teachers from projected demand derives the number of entrants needed. The projected number of entrants is then compared to the projected supply of entrants to determine the adequacy of the supply and hence, likely shortages or overages. Once the TCIS database is updated and online, it should be possible to get better estimates of the Reserve Pool. One way to do this is to have annual totals of new certificates and endorsements issued and also to have five- and ten- year cumulative totals. To get a better picture of out-of-state supply, the State Board recently began a joint supply and demand data collection and sharing effort with the other six North Central Regional Educational Laboratory (NCREL) states. Although the process has just started, it is hoped that a common set of definitions and preliminary supply data will be available within the next year.

Pipeline Data. In addition to the number of education graduates by field, in the near future, enrollment data from all 55 teacher-preparation programs will be included. ISBE is working closely with the Illinois Board of Higher Education (IBHE) and representatives from various colleges and universities to develop a common system for all institutions to report program applications, enrollments and completions by gender and ethnicity. The difficulty in the past has been the refusal of some institutions to respond to ISBE inquiries since this agency does not have the authority to collect the information. Furthermore, ISBE's definitions and timelines differed significantly from those of IACTE/NCATE which caused confusion and duplicated effort. The IBHE/ISBE Work Group was created to overcome this obstacle by developing a common set of data definitions and a single database that will allow institutions to respond to requests from ISBE,

IBHE, IACTE/NCATE and the new Title II Institutional Report Card requirements. In order to accomplish this, ISBE will need to devote resources to develop and maintain a data warehouse and interface for accessing this data. A good amount of planning has already occurred and a proposal for the design and implementation of a shared data warehouse was presented to the Joint Education Committee in October of this year.

Revision of Current Data Collection Methods. As a result of this study, the 1999 Unfilled Positions Survey was completely revised this fall to correspond to the TSR data fields. Work still needs to be done, however, to improve the ability to match teaching credentials (certificates and endorsements) to positions and teaching assignments. One idea that has received strong support from both the Certification Board and Agency staff, is to combine the TSR and TCIS data collection efforts. Most of the TSR data is currently imported into the TCIS system so it would be more efficient to enter it there. It would also immensely increase the timeliness and availability of the data.

Definition of Terms

DEMAND

Beginner: A first time teacher. This status is calculated from the TSR data field "total years experience." The definition is: {teaching experience is less than or equal to one year}

New Demand: = {Total New Positions + Unfilled Positions}
or
= {"Re-entries" + "Beginners" + Unfilled Positions}

Re-entry: A teacher who has prior teaching experience but did not teach in an Illinois public school the prior year (i.e., 1997-98).

State FT:
= Total of FT (full time) personnel by position/teaching assignment. Full time was defined by two TSR fields: Months employed and percent time employed. The definition for full time status is: {Months > 8 & Percent time >99}

Total New Positions:
= {Number of "Re-entries" + number of "Beginners"}

Unfilled Positions: Number of FT positions reported unfilled as of December 1998 by each Illinois public school district on the Unfilled Positions Survey.

SUPPLY

Entitlements: The number of endorsements reported between July 1, 1998 and June 30, 1999. Each college reports the number of certificates and endorsements that each student is eligible to receive. Students become eligible once they have completed a program's requirements. Program requirements vary widely between certificates and between endorsement areas. These counts may be duplicates as one person can hold an unlimited number of certificates or endorsements.

Reserve Pool: The number of endorsements of educators currently not working. To limit the pool to candidates with a high probability of re-entering the workforce, only endorsements issued between July 1, 1979 and June 30, 1999 were included.

Endorsements: A credential on a certificate indicating the educator has met the minimum requirements for that subject area.

Tables and Appendices

Table 1: Full Time Personnel -- 1998-99 [All]

	n	Total
ADMINISTRATIVE		**8,100**
Regional Supt.	45	
Asst. Regional Supt.	47	
District Supt.	853	
Admin Assistant	194	
Asst. District Supt.	293	
Business Manager	167	
Elem Princ	2,271	
Asst Elem Princ	359	
Jr High Princ	549	
Asst. Jr. High Princ	347	
HS Princ	717	
Asst HS Princ	660	
Jr High Dean	109	
Sr High Dean	454	
Director	896	
Assistant Director	81	
Deputy Supt.	12	
Other Admin	6	
Associate Supt.	40	
INSTRUCTIONAL STAFF		**121,179**
Spec Ed Teacher (all)	19,833	
Elem Teacher	55,084	
Jr/Middle Teacher	16,731	
HS Teacher	29,531	
PROFESSIONAL STAFF		**7,307**
Guidance Counselor	2,831	
Psychologist	1,322	
Social Worker	2,187	
Nurse	953	
Intern Psychologist	10	
Intern Soc Worker	4	
OTHER CERTIFIED STAFF		**5,192**
Library/Media Specialist	1,892	
Instructional TV	1	
Adult Education	89	
Attendance Officer	42	
Occupational Therapist	9	
Physical Therapist	16	
Audiologist	6	
Diagnostician	38	
Supervisor	512	
Consultant	925	
Coordinator	1,662	
TOTAL		**141,778**

NOTE: Full Time= (mos>8 & %>99)

Table 2: Full Time Personnel -- 1998-99 [All]

	STATE [FT]		Re-Entries				Beginners				Total New	
			Down State	Chicago	TOTAL	%	Down State	Chicago	TOTAL	%		
ADMINISTRATIVE		**8,100**	**136**	**17**	**153**	**2%**	**12**	**0**	**12**	**0%**	**165**	**2%**
Regional Supt.	45											
Asst. Regional Supt.	47											
District Supt.	853		14		**14**	2%					14	2%
Admin Assistant	194		5		**5**	3%	1		1	0.5%	6	3%
Asst. District Supt.	293		5	1	**6**	2%					6	2%
Business Manager	167		5		**5**	3%	3		3	2%	8	5%
Elem Princ	2,271		18	6	**24**	1%	1		1	0%	25	1%
Asst Elem Princ	359		11	3	**14**	4%	1		1	0.3%	15	4%
Jr High Princ	549		4		**4**	1%					4	1%
Asst. Jr. High Princ	347		12		**12**	3%					12	3%
HS Princ	717		21	1	**22**	3%					22	3%
Asst HS Princ	660		4	1	**5**	1%					5	1%
Jr High Dean	109		8		**8**	7%					8	7%
Sr High Dean	454		5		**5**	1%	4		4	1%	9	2%
Director	896		21	3	**24**	3%	1		1	0.1%	25	3%
Assistant Director	81		1	1	**2**	2%	1		1	1%	3	4%
Deputy Supt.	12		1	1	**2**	17%					2	17%
Other Admin	6											
Associate Supt.	40		1		**1**	3%					1	3%
INSTRUCTIONAL STAFF		**121,179**	**3091**	**1022**	**4,113**	**3%**	**4,757**	**1,071**	**5,828**	**5%**	**9,941**	**8%**
Spec Ed Teacher (all)	19,833		818	211	**1,029**	5%	801	138	**939**	5%	1,968	10%
Elem Teacher	55,084		1229	640	**1,869**	3%	1991	729	**2720**	5%	4,589	8%
Jr/Middle Teacher	16,731		497		**497**	3%	905		**905**	5%	1,402	8%
HS Teacher	29,531		547	171	**718**	2%	1060	204	**1264**	4%	1,982	7%
PROFESSIONAL STAFF		**7,307**	**214**	**64**	**278**	**4%**	**285**	**34**	**319**	**4%**	**597**	**8%**
Guidance Counselor	2,831		68	19	**87**	3%	24	4	**28**	1%	115	4%
Psychologist	1,322		52	3	**55**	4%	68	1	**69**	5%	124	9%
Social Worker	2,187		74	23	**97**	4%	155	15	**170**	8%	267	12%
Nurse	953		20	18	**38**	4%	34	10	**44**	5%	82	9%
Intern Psychologist	10			1	**1**	10%	1	4	**5**	50%	6	60%
Intern Soc Worker	4						3		**3**	75%	3	75%
OTHER CERTIFIED STAFF		**5,192**	**127**	**57**	**184**	**4%**	**40**	**23**	**63**	**1%**	**247**	**5%**
Library/Media Specialist	1,892		27	15	**42**	2%	17	13	**30**	2%	72	4%
Instructional TV	1											
Adult Education	89		2		**2**	2%	2		**2**	2%	4	4%
Attendance Officer	42		5		**5**	12%					5	12%
Occupational Therapist	9		1	5	**6**	67%	1	1	**2**	22%	8	89%
Physical Therapist	16		1	1	**2**	13%					2	13%
Audiologist	6											
Diagnostician	38		2		**2**	5%					2	5%
Supervisor	512		12		**12**	2%	2		**2**	0.4%	14	3%
Consultant	925		12	25	**37**	4%	4	4	**8**	1%	45	5%
Coordinator	1,662		65	11	**76**	5%	14	5	**19**	1%	95	6%
TOTAL		**141,778**	**3,568**	**1,160**	**4,728**	**3%**	**5,094**	**1,128**	**6,222**	**4%**	**10,950**	**7.7%**

NOTE: **Full Time**= (Months Employed>8 & Percent Time Employed>99). **Re-entry**= prior teaching experience but not in last year's TSR file
Beginner= less than 1year teaching experience

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Table 3: New Demand by Position -- Downstate 1998-99

	Downstate [FT]		Re-Entries		Beginners		Total New Positions		Unfilled Positions		New Demand	
ADMINISTRATIVE		**7,113**	**136**	2%	**12**	0%	**148**	2%	**21.9**	0%	**170**	2%
Regional Supt./Asst. Reg.	92											
District Supt.	852		14				14	2%			14	2%
Admin Assistant	159		5		1		6	4%			6	4%
Asst. District Supt	282		5				5	2%			5	2%
Business Manager	165		5		3		8	5%			8	5%
Elem Princ	1,783		18		1		19	1%			19	1%
Asst Elem Princ	243		11		1		12	5%			12	5%
Jr High Princ	549		4				4	1%			4	1%
Asst. Jr. High Princ	347		12				12	3%			12	3%
HS Princ	621		21				21	3%			21	3%
Asst HS Princ	522		4				4	1%			4	1%
Jr High Dean	109		8				8	7%			8	7%
Sr High Dean	454		5		4		9	2%			9	2%
Director	811		21		1		22	3%			22	3%
Assistant Director	73		1		1		2	3%			2	3%
Deputy Supt.	11		1				1	9%			1	9%
Other Admin	0											
Associate Supt.	40		1				1	3%			1	3%
INSTRUCTIONAL STAFF		**97,540**	**3091**	3%	**4,757**	5%	**7,848**	8%	**724.4**	1%	**8,572**	9%
Spec Ed Teacher (all)	15,793		818		801		1,619	10%	558.4	4%	2,177	14%
Elem Teacher	40,191		1229		1991		3,220	8%	54.1	0%	3,274	8%
Jr/Sr High[1]	41,556		1044		1965		3,009	7%	111.9	0%	3,121	8%
PROFESSIONAL STAFF		**5,598**	**214**	4%	**285**	5%	**499**	9%	**75.3**	1%	**574**	10%
Guidance Counselor	2,011		68		24		92	5%	11.5	1%	104	5%
Psychologist	1,070		52		68		120	11%	43.3	4%	163	15%
Social Worker	1,828		74		155		229	13%	13.5	1%	243	13%
Nurse	675		20		34		54	8%	7.0	1%	61	9%
Intern Psychologist	1				1		1	100%			1	100%
Intern Soc Worker	4				3		3	75%			3	75%
OTHER CERTIFIED STAFF		**3,413**	**127**	4%	**40**	1%	**167**	5%	**16.1**	0%	**183**	5%
Library/Media Specialist	1,408		27		17		44	3%	16.1	1%	60	4%
Instructional TV	1						-					
Adult Education	88		2		2		4	5%			4	5%
Attendance Officer	41		5				5	12%			5	12%
Occupational Therapist	2		1		1		2	100%			2	100%
Physical Therapist	1		1				1	100%			1	100%
Audiologist	5						-					
Diagnostician	38		2				2	5%			2	5%
Supervisor	500		12		2		14	3%			14	3%
Consultant	252		12		4		16	6%			16	6%
Coordinator	1,077		65		14		79	7%			79	7%
Other									**41.2**		**41.2**	
Total		**113,664**	3,568	3%	5,094	4.5%	**8,662**	7.6%	**879**	0.8%	**9,541**	8.4%

1 Junior and Senior High are collapsed on the Unfilled Positions Survey, so the TSR data was combined to be compatible.
Note: All percents reflect percentage of Downstate full time personnel.

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Table 4: New Demand by Position -- Chicago 1998-99

	Chicago [FT]	Re-Entries		Beginners		Total New Positions		Unfilled Positions		New Demand	
ADMINISTRATIVE	**987**	**17**	1.7%	**0**	-	**17**	**1.7%**	**0**	-	**17**	**1.7%**
Regional Supt./Asst. Reg.											
District Supt.	1										
Admin Assistant	35										
Asst. District Supt.	11	1				1	9%			1	9%
Business Manager	2										
Elem Princ	488	6				6	1%			6	1%
Asst Elem Princ	116	3				3	3%			3	3%
Jr High Princ											
Asst. Jr. High Princ.											
HS Princ	96	1				1	1%			1	1%
Asst HS Princ	138	1				1	1%			1	1%
Jr High Dean											
Sr High Dean											
Director	85	3				3	4%			3	4%
Assistant Director	8	1				1	13%			1	13%
Deputy Supt.	1	1				1	100%			1	100%
Other Admin	6										
Associate Supt.											
INSTRUCTIONAL STAFF	**23,639**	**1022**	4.3%	**1071**	4.5%	**2,093**	**8.9%**	**922**	**3.9%**	**3,015**	**12.8%**
Spec Ed Teacher (all levels)	4040	211		138		349	9%	115		464	11%
Elem Teacher	14893	640		729		1369	9%	670		2039	14%
Jr/Middle Teacher[1]											
HS Teacher	4706	171		204		375	8%	137		512	11%
PROFESSIONAL STAFF	**1,709**	**64**	3.7%	**34**	2.0%	**98**	**5.7%**	**94**	**5.5%**	**192**	**11.2%**
Guidance Counselor	820	19		4		23	3%	94		117	14%
Psychologist	243	3		1		4	2%			4	2%
Social Worker	359	23		15		38	11%			38	11%
Nurse	278	18		10		28	10%			28	10%
Intern Psychologist	9	1		4		5	56%			5	56%
Intern Soc Worker											
OTHER CERTIFIED STAFF	**1,779**	**57**	3.2%	**23**	1.3%	**80**	**4.5%**	**0**	-	**80**	**4.5%**
Library/Media Specialist	484	15		13		28	6%			28	6%
Instructional TV											
Adult Education	1										
Attendance Officer	1										
Occupational Therapist	7	5		1		6	86%			6	86%
Physical Therapist	15	1				1	7%			1	7%
Audiologist	1										
Diagnostician											
Supervisor	12										
Consultant	673	25		4		29	4%			29	4%
Coordinator	585	11		5		16	3%			16	3%
Total	**28,114**	1,160	4.1%	1,128	4.0%	**2,288**	**8.1%**	**1,016**	**3.6%**	**3,304**	**11.8%**

1 There are no Junior High or Middle school personnel reported for Chicago

Note All percents reflect percentage of Chicago full time personnel

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Table 5: New Demand vs. New Supply -- 1998-99

MAIN ASSIGNMENT	State [FT]	New Demand		New Supply	Over/Under Supply	Reserve Pool
		Beginers	Unfilled Positions	#-of Entitlements		
*Self Contained (055)	41,492	1,945	543.0	1,793	-695	98,801
Z - Other Subject/Program Not Listed (047)	3,794	193	52.2	?	?	
Cross Categorical (097)	3,140	153	83.0	?	?	
Other/General Special Education (050)	1,672	61	115.1	?	?	
Bilingual Education (087)	2032	178	34.5	38	-175	2,103
Vocal Music (034)	2,488	99	n/a	9	-90	247
Sp. Ed. Early Childhood (074)	1,129	46	25.0	0	-71	0
Instrumental Music (035)	1,629	74	n/a	7	-67	222
Physically Handicapped (077)	293	5	56.0	4	-57	565
Speech and Language Impaired (079)	2,689	126	136.4	224	-38	2,363
Gifted Education (065)	779	17	3.0	0	-20	18
Visually Impaired (081)	291	7	10.0	?	?	293
COMPUTER EDUCATION/TECHNOLOGY	**1,362**	**44**	**11.0**	**43**	**-12**	**443**
Multiply Handicapped (082)	188	10	n/a	?	?	
Other English (006)	296	8	n/a	0	-8	1
Computer Literacy/Technology (093)	1,196	38	n/a	31	-7	321
Community Education (064)	19	1	0.0	?	?	
Homebound/Hospital (099)	38		n/a	?	?	
Japanese (068)	8		1.0	2	1	
Learning/Resource Center-Library (057)	483	11	16.1	32	5	1,117
Earth Science (048)	292	14	0.0	20	6	219
Latin (024)	48	1	0.8	9	7	153
Russian (069)	6		0.0	8	8	105
English as a Second Language (059)	582	27	4.5	40	9	287
German (023)	197	6	0.0	22	16	726
Other Foreign Language (026)	107	9	n/a	27	18	210
Deaf (073)	386	15	0.0	45	30	1,000
Hard of Hearing (098)	299	8	5.9	45	31	1,000
Journalism (004)	45	2	1.0	35	32	275
Audio Visual (051)	21		n/a	32	32	750
Computer Programming (094)	166	6	n/a	43	37	443
TMH (080)	777	25	5.0	78	48	2,358
Driver Education (037)	642	10	0.0	59	49	655
Reading Improvement (NonTitle I) (085)	863	30	4.5	85	51	2,066
Reading (002)	837	32	1.0	85	52	2,066
Severe/Profound Mentally Handicap (089)	221	9	12.0	78	57	2,358
Title I Remedial Reading (083)	260	7	0.0	85	78	2,066
French (022)	542	13	1.5	99	85	1,732
Business Math (027)	83	4	n/a	96	92	778
Psychology (011)	114	6	0.6	108	101	949
MUSIC	**4,117**	**173**	**n/a**	**281**	**108**	**4,926**
Health Education (071)	581	25	2.0	138	111	1,563
Consumer Education (038)	148	2	0.0	122	120	675
Dramatics (005)	112	2	n/a	127	125	1,199
Physics (016)	394	18	3.0	152	131	1,052
EMH (072)	1,229	34	9.0	183	140	5,173
Art (033)	2,764	93	53.5	331	185	3,944
Geography (008)	319	11	0.0	199	188	1,211
Physical Science (049)	331	20	2.0	219	197	2,371
Chemistry (015)	804	27	3.0	232	202	1,590

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Economics (010)	71	3	0.0	238	**235**	1,918
Speech (003)**	212	7	1.9	244	**235**	2,360
Behavior Disordered (078)	2,292	132	101.5	517	**284**	6,162
Spanish (025)	1,797	83	13.9	394	**297**	2,986
Civics (007)	174	7	0.0	373	**366**	2,410
Learning Disabled (076)	7,086	304	60.0	736	**372**	8,631
English (001)	5,205	246	18.5	699	**435**	7,022
Biology (014)	1,481	95	7.5	547	**445**	3,530
Physical Education (036)	7,046	260	78.8	788	**449**	9,554
Other Science (017)	310	17	n/a	496	**479**	3,320
MATHEMATICS	**6,662**	**285**	**27.8**	**798**	**485**	**7,247**
At Risk (PreK), (067)	1,351	97	n/a	592	**495**	13,868
Educationally Handicapped (075)	93	5	14.0	517	**498**	6,162
Basic and/or General Math (088)	3,043	161	26.8	798	**610**	7,247
General Science (013)	2,574	151	n/a	771	**620**	7,136
Title I Remedial Math (084)	3,448	135	1.0	798	**662**	7,247
Business English (028)	89	2	n/a	699	**697**	7,286
Algebra (018)	2,013	83	0.0	798	**715**	7,247
Other Math (021)	940	24	1.0	798	**773**	7,247
Geometry (019)	560	16	0.0	798	**782**	7,247
Adapted P.E. (096)	130	4	2.0	788	**782**	9,554
NonTitle I Remedial Math (086)	25	1	0.0	798	**797**	7,247
History (009)	2,344	103	1.0	1,789	**1,685**	11,777
Language Arts (058)	2,995	200	n/a	1,976	**1,776**	23,462
General &/or Other Social Studies (012)	2,597	159	0.0	2,819	**2,660**	30,462

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Table 6: Total Demand vs. the Reserve Pool -- 1998-99

MAIN ASSIGNMENT	State [FT]	Total Demand		Reserve Pool	Over/Under Supply
Z - Other Subject/Program Not Listed (047)	3,794	451	12%	?	?
Cross Categorical (097)	3,140	416	13%	?	?
Other/General Special Education (050)	1,672	242	14%	?	?
Sp. Ed. Early Childhood (074)	1,129	129	11%	0	-129
Gifted Education (065)	779	50	6%	18	-32
Multiply Handicapped (082)	188	16	9%	?	?
Other English (006)	296	12	4%	1	-11
Community Education (064)	19	1	5%	?	?
Japanese (068)	8	1	13%	?	?
Homebound/Hospital (099)	38			?	?
Vocal Music (034)	2,488	180	7%	247	67
Instrumental Music (035)	1,629	138	8%	222	84
Russian (069)	6	0	0%	105	105
Latin (024)	48	2	4%	153	151
Other Foreign Language (026)	107	15	14%	210	195
Earth Science (048)	292	19	7%	219	200
English as a Second Language (059)	582	73	12%	287	215
Computer Literacy/Technology (093)	1,196	77	6%	321	244
Visually Impaired (081)	291	27	9%	293	266
Journalism (004)	45	3	7%	275	272
COMPUTER EDUCATION/TECHNOLOGY	**1,362**	**98**	**7%**	443	345
Computer Programming (094)	166	10	6%	443	433
Physically Handicapped (077)	293	76	26%	565	489
Driver Education (037)	642	15	2%	655	640
Consumer Education (038)	148	6	4%	675	669
German (023)	197	11	6%	726	715
Audio Visual (051)	21	1	5%	750	749
Business Math (027)	83	9	11%	778	769
Psychology (011)	114	7	6%	949	942
Deaf (073)	386	36	9%	1,000	964
Hard of Hearing (098)	299	30	10%	1,000	970
Physics (016)	394	35	9%	1,052	1,017
Learning/Resource Center-Library (057)	483	43	9%	1,117	1,074
Dramatics (005)	112	4	4%	1,199	1,195
Geography (008)	319	16	5%	1,211	1,195
Health Education (071)	581	39	7%	1,563	1,524
Chemistry (015)	804	45	6%	1,590	1,545
French (022)	542	30	5%	1,732	1,703
Bilingual Education (087)	2032	345	17%	2,103	1,759
Economics (010)	71	3	4%	1,918	1,915
Reading Improvement (NonTitle I) (085)	863	77	9%	2,066	1,990
Speech and Language Impaired (079)	2,689	370	14%	2,363	1,993
Reading (002)	837	69	8%	2,066	1,997
Title I Remedial Reading (083)	260	14	5%	2,066	2,052
TMH (080)	777	62	8%	2,358	2,296
Severe/Profound Mentally Handicap (089)	221	31	14%	2,358	2,327
Physical Science (049)	331	28	8%	2,371	2,343
Speech (003)**	212	15	7%	2,360	2,345
Civics (007)	174	12	7%	2,410	2,398
Spanish (025)	1,797	166	9%	2,986	2,820

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Other Science (017)	310	30	10%	3,320	**3,290**
Biology (014)	1,481	131	9%	3,530	**3,400**
Art (033)	2,764	209	8%	3,944	**3,736**
MUSIC	**4,117**	**318**	**8%**	**4,926**	**4,608**
EMH (072)	1,229	84	7%	5,173	**5,089**
Behavior Disordered (078)	2,292	395	17%	6,162	**5,768**
Educationally Handicapped (075)	93	23	25%	6,162	**6,139**
English (001)	5,205	404	8%	7,022	**6,619**
MATHEMATICS	**6,662**	**483**	**7%**	**7,247**	**6,764**
General Science (013)	2,574	212	8%	7,136	**6,924**
Basic and/or General Math (088)	3,043	280	9%	7,247	**6,967**
Title I Remedial Math (084)	3,448	266	8%	7,247	**6,981**
Algebra (018)	2,013	130	6%	7,247	**7,117**
Other Math (021)	940	46	5%	7,247	**7,201**
Geometry (019)	560	26	5%	7,247	**7,221**
NonTitle I Remedial Math (086)	25	1	4%	7,247	**7,246**
Business English (028)	89	4	4%	7,286	**7,282**
Learning Disabled (076)	7,086	685	10%	8,631	**7,946**
Physical Education (036)	7,046	446	6%	9,554	**9,108**
Adapted P.E. (096)	130	12	9%	9,554	**9,542**
History (009)	2,344	145	6%	11,777	**11,632**
At Risk (PreK), (067)	1,351	157	12%	13,868	**13,711**
Language Arts (058)	2,995	312	10%	23,462	**23,150**
General &/or Other Social Studies (012)	2,597	216	8%	30,462	**30,246**
*Self Contained (055)	41,492	3,722	9%	98,801	**95,079**

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Table 8: New Demand -- Chicago [FT]

MAIN ASSIGNMENT	State [FT]	Chicago	Total New Positions	Unfilled Positions	NEW DEMAND	
*Self Contained (055)	40,973	9,888	861	512.0	1,373	14%
Art (033)	2,439	399	30	48.0	78.0	20%
At Risk (PreK), (067)	1,271	445	27	n/a		
Audio Visual (051)	19		0	n/a		
Bilingual Education (087)	2009	860	96	0.0	96.0	11%
Community Education (064)	17		0	0.0		
Consumer Education (038)	137		0	0.0		
Driver Education (037)	628	3	0	0.0		
English as a Second Language (059)	525	66	7	0.0	7.0	11%
Gifted Education (065)	669	34	1	0.0	1.0	3%
Health Education (071)	552	9	1	0.0	1.0	11%
Learning/Resource Center-Library (057)	461	54	2	0.0	2.0	4%
Physical Education (036)	6,772	988	41	66.0	107.0	11%
Reading Improvement (NonTitle I) (085)	756	24	1	0.0	1.0	4%
Z - Other Subject/Program Not Listed (047)	3,619	2,064	218	10.0	228.0	11%
COMPUTER EDUCATION/TECHNOLOGY	**1,309**			7.0		
Computer Literacy/Technology (093)	1,145	131	4	n/a	4	3%
Computer Programming (094)	164	88	5	n/a	5	6%
ENGLISH						
Business English (028)	87	80	4	n/a	4	5%
Dramatics (005)	97	9	1	n/a	1	11%
English (001)	5,062	731	69	17.0	86.0	12%
Journalism (004)	42		0	0.0		
Language Arts (058)	2,927	97	9	n/a	9	9%
Other English (006)	282	1	0	n/a		
Reading (002)	801	9	0	0.0		
Speech (003)**	209	14	0	0.0		
FOREIGN LANGUAGE						
French (022)	469	55	4	0.0	4.0	7%
German (023)	167	6	2	0.0	2.0	33%
Japanese (068)	5			0.0		
Latin (024)	36	1		0.0		
Other Foreign Language (026)	98	67	12	n/a	12	18%
Russian (069)	6			0.0		
Spanish (025)	1,617	172	22	0.0	22.0	13%
MATHEMATICS						
Algebra (018)	1,949		0	0.0		
Basic and/or General Math (088)	2,967	49	1	18.0	19.0	39%
Business Math (027)	82	56	6	n/a	6.0	11%
Geometry (019)	536		0	0.0		
NonTitle I Remedial Math (086)	20	3	0	0.0		
Other Math (021)	924	565	33	0.0	33.0	6%
Trigonometry (020)	80			n/a		
MUSIC						
Instrumental Music (035)	1,517	110	4	n/a	4.0	4%
Vocal Music (034)	2,158	329	25	n/a	25.0	8%

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NATURAL SCIENCE						
Biology (014)	1,450	**229**	24	0.0	24.0	10%
Chemistry (015)	791	**97**	10	1.5	11.5	12%
Earth Science (048)	288	**10**	1	0.0	1.0	10%
General Science (013)	2,537	**141**	9	n/a	9.0	6%
Other Science (017)	308	**74**	3	n/a	3.0	4%
Physical Science (049)	325		0	1.0	1.0	
Physics (016)	382	**48**	8	1.5	9.5	20%
SPECIAL EDUCATION						
Adapted P.E. (096)	115		0	0.0		
Behavior Disordered (078)	2,242	**317**	25	17.0	42.0	13%
Cross Categorical (097)	3,093	**1,040**	115	0.0	115.0	11%
Deaf (073)	374	**153**	12	0.0	12.0	8%
Early Childhood (074)	1,053	**158**	5	15.0	20.0	13%
Educationally Handicapped (075)	88		0	14.0	14.0	
EMH (072)	1,213	**222**	16	0.0	16.0	7%
Hard of Hearing (098)	273	**13**	0	4.0	4.0	31%
Homebound/Hospital (099)	32	**19**		n/a		
Learning Disabled (076)	6,855	**1,109**	85	55.0	140.0	13%
Multiply Handicapped (082)	182	**74**	1	n/a	1.0	1%
Other/General Special Education (050)	1,616	**583**	50	0.0	50.0	9%
Physically Handicapped (077)	283	**157**	11	8.0	19.0	12%
Severe/Profound Mentally Handicap. (089)	218	**42**	4	0.0	4.0	10%
Speech and Language Impaired (079)	2,235	**236**	27	1.0	28.0	12%
TMH (080)	763	**139**	3	0.0	3.0	2%
Visually Impaired (081)	262	**66**	3	1.0	4.0	6%
SOCIAL SCIENCE						
Civics (007)	172		0	0.0		
Economics (010)	69		0	0.0		
General &/or Other Social Studies (012)	2,556	**206**	20	0.0	20.0	10%
Geography (008)	311	**32**	0	0.0		
History (009)	2,297	**438**	39	0.0	39.0	9%
Psychology (011)	101		0	0.0		
TITLE 1						
Title I Remedial Math (084)	237	**44**	1	0.0	1.0	2%
Title I Remedial Reading (083)	3,335	**1,401**	154	0.0	154.0	11%
VOCATIONAL TECHNICAL PROGRAMS						
Agriculture	**302**	**10**		**0.0**		
Agricultural Business & Mgt. (101)	95		0	n/a		
Agricultural Mechanization (102)	13			n/a		
Agricultural Resources/Conservation (103)	3			n/a		
Agricultural Sciences (104)	82	7	0	n/a		
Horticulture Services (105)	29	3	0	n/a		
Orientation to Agriculture (100)	67		0	n/a		
Other Agricultural Occupations (106)	13			n/a		
Business, Marketing & Management	**1,382**	**192**	**7**	**21.0**	**28.0**	**15%**
Accounting/Bookkeeping (108)	298	**16**	0	n/a		
Administrative Assistant/Secretarial (109)	24			n/a		
Banking & Financial Support (110)	15	9	0	n/a		
Business Admin. & Management (111)	25		0	n/a		
Business Computer Programming (112)	20		0	n/a		
Enterprise Management (113)	5		0	n/a		
Information/Data Processing) (060)	137	**14**	2	n/a		
Legal Administrative Assistant (114)	4			n/a		

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Marketing Operations (115)	16			n/a		
Medical Administrative Assistant (116)	0			n/a		
Orientation to Business Occupations (107)	685	86	3	n/a		
Other Business Occupations (118)	145	67	2	n/a		
Product Marketing (117)	8			n/a		
Family & Consumer Sciences	**1,130**	**69**	**1**	**0.0**	**1.0**	**1%**
Child Care & Guidance (129)	189		0	n/a		
Clothing & Apparel (130)	94	2	0	n/a		
Cosmetology (131)	23	10	1	n/a		
Custodial/Housekeeping/Home Serv. (132)	9			n/a		
Foods Services Occupations (133)	149	7	0	n/a		
Foods Services/Lodging Mgt. (134)	13	4	0	n/a		
Home Furnishings (135)	3		0	n/a		
Hospitality (136)	0			n/a		
Occupation of Homemaking (137)	183		0	n/a		
Orientn to F&CS/Foods & Nutrition (128)	367	46	0	n/a		
Other F&CS Occupations (140)	97		0	n/a		
Social Work (138)	2		0	n/a		
Teacher Aide (139)	1			n/a		
Health Occupations	**72**	**18**	**2**	**0.0**	**2.0**	**11%**
Clinical Laboratory (120)	0			n/a		
Dental Assistant (121)	1		0	n/a		
Medical Office/Assistant (122)	2		0	n/a		
Medical Records (123)	0			n/a		
Nursing Assistant/Aide (124)	28	11	0	n/a		
Nursing Services (125)	13	3	1	n/a		
Ophthalmic Services (126)	1			n/a		
Orientation to Health Occupations (119)	15		0	n/a		
Other Health Occupations (127)	12	4	1	n/a		
Industrial	**1,558**	**210**	**11**	**8.0**	**19.0**	**9%**
Architectural Drafting (142)	52	4	1	n/a		
Auto/Automotive Body Repair (143)	49			n/a		
Auto/Automotive Mechanic/Techn (144)	181	27	3	n/a		
Aviation Systems/Maintenance (145)	5	2		n/a		
Building & Property Maintenance (146)	6		0	n/a		
Cabinet Maker/Millworker/Woodwork (147)	129	19	1	n/a		
Carpenter (148)	51	7	1	n/a		
Comm. Systems Installer/Repairer (149)	7	4	1	n/a		
Computer Installer/Repair (150)	6		0	n/a		
Construction (151)	84	4	0	n/a		
Drafting (152)	203	59	2	n/a		
Electrical/Electronics Equip Installers/Repairers (043)	97	14	0	n/a		
Graphic & Printing Equip. Operators (154)	33			n/a		
Graphic Design/Commercial Art (153)	73	29	1	n/a		
Heating, AC & Refrigeration (155)	6	1		n/a		
Machine Shop Assistant (156)	18	9	0	n/a		
Manufacturing (157)	32		0	n/a		
Mechanical Drafting (158)	28	12	0	n/a		
(141)	259	10	1	n/a		
Other Industrial Occupations (164)	115	1	0	0 0		
Precision Metal Worker (159)	28	4	0	n/a		
Protective Services/Law Enforcement/Fire Fighter (160)	1			n/a		
Radio & TV Broadcasting (161)	14		0	n/a		
Technical Prep/Engineering-Related Technologies (162)	46		0	n/a		

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Welding (163)	35	4		0	n/a		
Vocational Technical Miscellaneous	**468**		**45**	9	n/a	**9.0**	**20%**
Career Awareness and Development (166)	81	**15**		0	n/a		
Cooperative Vocational Education (056)	371	**30**		9	n/a		
Specialized Vocational Education (165)	16				n/a		
Column Totals	125,268	**25,002**		2142	826.0	**2,934**	**12%**

* Refers to an Elementary Assignment in which an individual teaches all subjects
** Public speaking or debate. Does not refer to Speech/Language Impairment

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Table 9: New Demand -- Downstate [FT]

MAIN ASSIGNMENT	State [FT]	Down State		Total New Positions	Unfilled Positions	NEW DEMAND	
*Self Contained (055)	40,973	31,604		2,318	31.0	2,349	7%
Art (033)	2,439	2,365		125	5.5	131	6%
At Risk (PreK), (067)	1,271	906		130	n/a	130	14%
Audio Visual (051)	19	21		1	n/a	1	5%
Bilingual Education (087)	2009	1,172		214	34.5	249	21%
Community Education (064)	17	19		1	0.0	1	5%
Consumer Education (038)	137	148		6	0.0	6	4%
Driver Education (037)	628	639		15	0.0	15	2%
English as a Second Language (059)	525	516		61	4.5	66	13%
Gifted Education (065)	669	745		46	3.0	49	7%
Health Education (071)	552	572		36	2.0	38	7%
Learning/Resource Center-Library (057)	461	429		25	16.1	41	10%
Physical Education (036)	6,772	6,058		326	12.8	339	6%
Reading Improvement (NonTitle I) (085)	756	839		71	4.5	76	9%
Z - Other Subject/Program Not Listed (047)	3,619	1,730		181	42.2	223	13%
COMPUTER EDUCATION/TECHNOLOGY	**1,309**		**1,143**		**4.0**	**11**	**1%**
Computer Literacy/Technology (093)	1,145	1,065		73	n/a	73	7%
Computer Programming (094)	164	78		5	n/a	5	6%
ENGLISH							
Business English (028)	87	9		0	n/a		
Dramatics (005)	97	103		3	n/a	3	3%
English (001)	5,062	4,474		316	1.5	318	7%
Journalism (004)	42	45		2	1.0	3	7%
Language Arts (058)	2,927	2,898		303	n/a	303	10%
Other English (006)	282	295		12	n/a	12	4%
Reading (002)	801	828		68	1.0	69	8%
Speech (003)**	209	198		13	1.9	15	8%
FOREIGN LANGUAGE							
French (022)	469	487		24	1.5	26	5%
German (023)	167	191		9	0.0	9	5%
Japanese (068)	5	8			1.0	1	13%
Latin (024)	36	47		1	0.8	2	4%
Other Foreign Language (026)	98	40		3	n/a	3	8%
Russian (069)	6	6			0.0		
Spanish (025)	1,617	1,625		130	13.9	144	9%
MATHEMATICS							
Algebra (018)	1,949	2,013		130	0.0	130	6%
Basic and/or General Math (088)	2,967	2,994		252	8.8	261	9%
Business Math (027)	82	27		3	n/a	3	11%
Geometry (019)	536	560		26	0.0	26	5%
NonTitle I Remedial Math (086)	20	22		1	0.0	1	5%
Other Math (021)	924	375		12	1.0	13	3%
Trigonometry (020)	80	81			n/a		
MUSIC							
Instrumental Music (035)	1,517	1,519		134	n/a	134	9%
Vocal Music (034)	2,158	2,159		155	n/a	155	7%

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NATURAL SCIENCE						
Biology (014)	1,450	1,252	99	7.5	107	9%
Chemistry (015)	791	707	32	1.5	34	5%
Earth Science (048)	288	282	18	0.0	18	6%
General Science (013)	2,537	2,433	203	n/a	203	8%
Other Science (017)	308	236	27	n/a	27	11%
Physical Science (049)	325	331	26	1.0	27	8%
Physics (016)	382	346	24	1.5	26	7%
SPECIAL EDUCATION						
Adapted P.E. (096)	115	130	10	2.0	12	9%
Behavior Disordered (078)	2,242	1,975	268	84.5	353	18%
Cross Categorical (097)	3,093	2,100	218	83.0	301	14%
Deaf (073)	374	233	24	0.0	24	10%
Early Childhood (074)	1,053	971	99	10.0	109	11%
Educationally Handicapped (075)	88	93	9	0.0	9	10%
EMH (072)	1,213	1,007	59	9.0	68	7%
Hard of Hearing (098)	273	286	24	1.9	26	9%
Homebound/Hospital (099)	32	19		n/a		
Learning Disabled (076)	6,855	5,977	540	5.0	545	9%
Multiply Handicapped (082)	182	114	15	n/a	15	13%
Other/General Special Education (050)	1,616	1,089	77	115.1	192	18%
Physically Handicapped (077)	283	136	9	48.0	57	42%
Severe/Profound Mentally Handicap. (089)	218	179	15	12.0	27	15%
Speech and Language Impaired (079)	2,235	2,453	207	135.4	342	14%
TMH (080)	763	638	54	5.0	59	9%
Visually Impaired (081)	262	225	14	9.0	23	10%
SOCIAL SCIENCE						
Civics (007)	172	174	12	0.0	12	7%
Economics (010)	69	71	3	0.0	3	4%
General &/or Other Social Studies (012)	2,556	2,391	196	0.0	196	8%
Geography (008)	311	287	16	0.0	16	6%
History (009)	2,297	1,906	105	1.0	106	6%
Psychology (011)	101	114	6	0.6	7	6%
TITLE 1						
Title I Remedial Math (084)	237	216	13	0.0	13	6%
Title I Remedial Reading (083)	3,335	2,047	111	1.0	112	5%
VOCATIONAL TECHNICAL PROGRAMS						
Agriculture	**302**	**313**	**19**	**0.5**	**20**	**6%**
Agricultural Business & Mgt. (101)	95	102	6	n/a	6	
Agricultural Mechanization (102)	13	15		n/a		
Agricultural Resources/Conservation (103)	3	3		n/a		
Agricultural Sciences (104)	82	81	6	n/a	6	
Horticulture Services (105)	29	28	1	n/a	1	
Orientation to Agriculture (100)	67	71	6	n/a	6	
Other Agricultural Occupations (106)	13	13		n/a		
Business, Marketing & Management	**1,382**	**1,251**	**58**	**4.2**	**90**	**7%**
Accounting/Bookkeeping (108)	298	293	14	n/a	14	
Administrative Assistant/Secretarial (109)	24	27		n/a		
Banking & Financial Support (110)	15	6	1	n/a	1	
Business Admin. & Management (111)	25	26	2	n/a	2	
Business Computer Programming (112)	20	20	1	n/a	1	
Enterprise Management (113)	5	5	1	n/a	1	
Information/Data Processing) (060)	137	131	8	n/a	8	
Legal Administrative Assistant (114)	4	4		n/a		

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Marketing Operations (115)	16	18		n/a		
Medical Administrative Assistant (116)	0	1		n/a		
Orientation to Business Occupations (107)	685	628	26	n/a	26	
Other Business Occupations (118)	145	84	5	n/a	5	
Product Marketing (117)	8	8		n/a		
Family & Consumer Sciences	**1,130**	**1,194**	**46**	**6.0**	**52**	**4%**
Child Care & Guidance (129)	189	213	8	n/a	8	
Clothing & Apparel (130)	94	106	2	n/a	2	
Cosmetology (131)	23	16	1	n/a	1	
Custodial/Housekeeping/Home Serv (132)	9	10		n/a		
Foods Services Occupations (133)	149	165	4	n/a	4	
Foods Services/Lodging Mgt. (134)	13	11	2	n/a	2	
Home Furnishings (135)	3	3	1	n/a	1	
Hospitality (136)	0			n/a		
Occupation of Homemaking (137)	183	211	10	n/a	10	
Orientn to F&CS/Foods & Nutrition (128)	367	352	12	n/a	12	
Other F&CS Occupations (140)	97	104	4	n/a	4	
Social Work (138)	2	2	2	n/a	2	
Teacher Aide (139)	1	1		n/a		
Health Occupations	**72**	**79**	**9**	**0.0**	**9**	**11%**
Clinical Laboratory (120)	0	1		n/a		
Dental Assistant (121)	1	1	1	n/a	1	
Medical Office/Assistant (122)	2	2	1	n/a	1	
Medical Records (123)	0			n/a		
Nursing Assistant/Aide (124)	28	22	3	n/a	3	
Nursing Services (125)	13	16		n/a		
Ophthalmic Services (126)	1	1		n/a		
Orientation to Health Occupations (119)	15	24	3	n/a	3	
Other Health Occupations (127)	12	12	1	n/a	1	
Industrial	**1,558**	**1,486**	**64**	**16.0**	**80**	**5%**
Architectural Drafting (142)	52	52	2	n/a	2	
Auto/Automotive Body Repair (143)	49	58		n/a		
Auto/Automotive Mechanic/Techn (144)	181	169	3	n/a	3	
Aviation Systems/Maintenance (145)	5	3		n/a		
Building & Property Maintenance (146)	6	6	1	n/a	1	
Cabinet Maker/Millworker/Woodwork (147)	129	117	3	n/a	3	
Carpenter (148)	51	45	2	n/a	2	
Comm. Systems Installer/Repairer (149)	7	3	2	n/a	2	
Computer Installer/Repair (150)	6	6	1	n/a	1	
Construction (151)	84	91	5	n/a	5	
Drafting (152)	203	156	5	n/a	5	
Electrical/Electronics Equip Installers/Repairers (043)	97	98	4	n/a	4	
Graphic & Printing Equip. Operators (154)	33	36		n/a		
Graphic Design/Commercial Art (153)	73	55	3	n/a	3	
Heating, AC & Refrigeration (155)	6	5		n/a		
Machine Shop Assistant (156)	18	15	1	n/a	1	
Manufacturing (157)	32	36	2	n/a	2	
Mechanical Drafting (158)	28	17	1	n/a	1	
Orientn to Indust. Techn Occupations/General Shop (141)	259	268	14	n/a	14	
Other Industrial Occupations (164)	115	116	5	5.0	10	
Precision Metal Worker (159)	28	27	1	n/a	1	
Protective Services/Law Enforcement/Fire Fighter (160)	1	1		n/a		
Radio & TV Broadcasting (161)	14	15	1	n/a	1	
Technical Prep/Engineering Related Technologies (162)	46	50	6	n/a	6	

Welding (163)	35	41		2	n/a	2	
Vocational Technical Miscellaneous	**468**		**455**	**20**	n/a	**29**	**6%**
Career Awareness and Development (166)	81	**75**		12	n/a	12	
Cooperative Vocational Education (056)	371	**363**		8	n/a	8	
Specialized Vocational Education (165)	16	**17**			n/a		
Column Totals	**125,268**	**105,117**		7,980	758.2	**11,701**	

* Refers to an Elementary Assignment in which an individual teaches all subjects
** Public speaking or debate. Does not refer to Speech/Language Impairment

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Appendix A: Educational Personnel by Main Position

	Full Time		Part Time		
	Freq.	Percent	Freq.	Percent	TOTAL
Administrative Staff	**8,100**		**146**		
1 Regional Supt.	45	0.0			**45**
2 Asst. Regional Supt.	47	0.0	4		**51**
3 District Supt.	853	0.6	47	2.4	**900**
4 Admin Assistant	194	0.1	9	0.1	**203**
5 Asst. District Supt.	293	0.2	7	0.3	**300**
6 Business Manager	167	0.1	7	0.1	**174**
7 Elem Princ	2,271	1.6	18	0.6	**2,289**
8 Asst Elem Princ	359	0.2	3		**362**
9 Jr High Princ	549	0.4	2		**551**
10 Asst. Jr. High Princ	347	0.2		0.1	**347**
11 HS Princ	717	0.5	9	0.5	**726**
12 Asst HS Princ	660	0.5	7	0.4	**667**
13 Jr High Dean	109	0.1	1	0.1	**110**
14 Sr High Dean	454	0.3	3	0.3	**457**
25 Director	896	0.6	26	0.8	**922**
52 Assistant Director	81	0.1	3		**84**
49 Deputy Supt.	12	0.0			**12**
50 Other Admin	6	0.0			**6**
51 Associate Supt.	40	0.0			**40**
Instructional Staff	**121,179**		**5,385**		
18 Spec Ed Teacher (all)	19,833	14.1	1,154	18.1	**20,987**
19 Elem Teacher	55,084	38.6	2,071	34.5	**57,155**
20 Jr/Middle Teacher	16,731	11.7	628	11.8	**17,359**
22 HS Teacher	29,531	21.0	1,532	23.0	**31,063**
Professional Staff	**7,307**		**606**		
23 Guidance Counselor	2,831	2.0	81	0.8	**2,912**
27 Psychologist	1,322	1.0	181	0.8	**1,503**
32 Social Worker	2,187	1.6	237	2.4	**2,424**
33 Nurse	953	0.7	107	0.8	**1,060**
41 Intern Psychologist	10	0.0			**10**
42 Intern Soc Worker	4	0.0			**4**
Other Certified Staff	**5,192**		**221**		
24 Library/Media Specialist	1,892	1.3	40	0.3	**1,932**
38 Instructional TV	1	0.0			**1**
39 Adult Education	89	0.1	36	0.5	**125**
40 Attendance Officer	42	0.0	6	0.5	**48**
43 Occupational Therapist	9	0.0			**9**
44 Physical Therapist	16	0.0	1		**17**
45 Audiologist	6	0.0	2	0.1	**8**
46 Diagnostician	38	0.0	2		**40**
15 Supervisor	512	0.4	12	0.1	**524**
16 Consultant	925	0.6	27		**952**
17 Coordinator	1,662	1.2	95	0.8	**1,757**
Total Full Time	**275,456**	100	**12,570**	100	**288,026**

Full Time= (mos>8 & %>99)

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Appendix B: 1998-99 Supply by Teaching Assignment

MAIN ASSIGNMENT	State (FT)	Supply # of Entitlements	Supply Reserve Pool	Endorsement(s)	Certificate (level)
*Self Contained (055)	40,973	1,793	98,801	#03	03
Art (033)	2,439	331	3,944	ART DA	03M, 09, 09M, 09H, 10
At Risk (PreK), (067)	1,271	592	13,868	#04	02, 04
Audio Visual (051)	19	32	750	AV, MED, MTV	
Bilingual Education (087)	2009	38	2,103	B_ _ _ (lang.) / #29	03M, 09, 09M, 09H, 10, 29
Community Education (064)	17				
Consumer Education (038)	137	122	675	CERM, CEHM, BB	09, 09H
Driver Education (037)	628	59	655	DRED, SDE	03, 03M, 09, 09M, 09H
English as a Second Language (059)	525	40	287	ESL	03M, 09, 09M, 09H, 10
Gifted Education (065)	669	0	18	GIED	03, 03M, 09, 09M, 09H
Health Education (071)	552	138	1,563	HEED	03M, 09, 09M, 09H, 10
Learning/Resource Center-Library (057)	461	32	1,117	MED, LIBR	03M, 09, 09M, 09H, 10
Physical Education (036)	6,772	788	9,554	PE	03M, 09, 09M, 09H, 10
Reading Improvement (NonTitle I) (085)	756	85	2,066	READ	03M, 09, 09M, 09H, 10
Z - Other Subject/Program Not Listed (047)	3,619				
COMPUTER EDUCATION/TECHNOLOGY	**1,309**	**43**	**443**	COSC, BCPS	
Computer Literacy/Technology (093)	1,145	31	362	COSC	03M, 09, 09M, 09H, 10
Computer Programming (094)	164	43	443	BCPS, COSC	03M, 09, 09M, 09H, 10
ENGLISH					
Business English (028)	87	699	7,286	BUEN, ENGL	09, 09M, 09H, 10
Dramatics (005)	97	127	1,199	SPTH, TH, THAR, THDR	03M, 09, 09M, 09H, 10
English (001)	5,062	699	7,022	ENGL	09, 09H, 10
Journalism (004)	42	35	275	JO	09, 09H
Language Arts (058)	2,927	1,976	23,462	LA	03M, 10
Other English (006)	282	0	1	ALIT, COMP, ELIT, LIT	09, 09H, 10
Reading (002)	801	85	2,066	READ	03M, 09, 09M, 09H, 10
Speech (003)**	209	244	2,360	SP, SPCO, SPPA, SPTH	03M, 09, 09M, 09H, 10
FOREIGN LANGUAGE					
French (022)	469	99	1,732	FREN	03M, 09, 09M, 09H, 10
German (023)	167	22	726	GERM	03M, 09, 09M, 09H, 10
Japanese (068)	5	2	37	JAPA	03M, 09, 09M, 09H, 10
Latin (024)	36	9	153	LATI	03M, 09, 09M, 09H, 10
Other Foreign Language (026)	98	27	210	CHIN, GREE, HEB, ITAL, KORE, POLI, PORT	03M, 09, 09M, 09H, 10
Russian (069)	6	8	105	RUSS	03M, 09, 09M, 09H, 10
Spanish (025)	1,617	394	2,986	SPAN	03M, 09, 09M, 09H, 10
MATHEMATICS				**MATH**	**03M, 09, 09M, 09H, 10**
Algebra (018)	1,949	798	7,247	MATH	03M, 09, 09M, 09H, 10
Basic and/or General Math (088)	2,967	798	7,247	MATH	03M, 09, 09M, 09H, 10
Business Math (027)	82	96	778	BUAR, BUM, BB	09, 09H
Geometry (019)	536	798	7,247	MATH	03M, 09, 09M, 09H, 10
NonTitle I Remedial Math (086)	20	798	7,247	MATH	03M, 09, 09M, 09H, 10
Other Math (021)	924	798	7,247	MATH	03M, 09, 09M, 09H, 10
Trigonometry (020)	80	798	7,247	MATH	03M, 09, 09M, 09H, 10
MUSIC		**281**	**4,926**	MUS	**03M,10**
Instrumental Music (035)	1,517	7	222	MUSI	09, 09H
Vocal Music (034)	2,158	9	247	MUSV	09, 09H
NATURAL SCIENCE					
Biology (014)	1,450	547	3,530	BI, BISC, LISC, NSBI	03M, 09, 09M, 09H, 10
Chemistry (015)	791	232	1,590	CH	09, 09H, 10
Earth Science (048)	288	20	219	ES	09, 09H

General Science (013)	2,537	771	7,136	GESC, GSM AN, ASMY, BO, GEOL	03M, 09, 09M, 09H, 10
Other Science (017)	308	496	3,320	PHGY, ZOO	03M, 09, 09M, 09H, 10
Physical Science (049)	325	219	2,371	PHSC	03M,10
Physics (016)	382	152	1,052	PHYS	09, 09H, 10
SPECIAL EDUCATION					
Adapted P.E. (096)	115	788	9,554	PE	10.0
Behavior Disordered (078)	2,242	517	6,162	SED	10.0
Cross Categorical (097)	3,093				
Deaf (073)	374	45	1,000	DHH	10.0
Early Childhood (074)	1,053	0	0	ECT	10.0
Educationally Handicapped (075)	88	517	6,162	SED	10.0
EMH (072)	1,213	183	5,173	EMH	10.0
Hard of Hearing (098)	273	45	1,000	DHH, HH	10.0
Homebound/Hospital (099)	32				
Learning Disabled (076)	6,855	736	8,631	LD	10.0
Multiply Handicapped (082)	182				
Other/General Special Education (050)	1,616				
Physically Handicapped (077)	283	4	565	PH	10.0
Severe/Profound Mentally Handicap. (089)	218	78	2,358	TMH	10.0
Speech and Language Impaired (079)	2,235	224	2,363	SLI	10.0
TMH (080)	763	78	2,358	TMH	10.0
Visually Impaired (081)	262		293	BPS	10.0
SOCIAL SCIENCE					03M, 10
Civics (007)	172	373	2,410	CIPS	10.0
Economics (010)	69	238	1,918	EC, BUEC, BB	09, 09H
General &/or Other Social Studies (012)	2,556	2,819	30,462	SOSC, SOST, POSC, SO	
Geography (008)	311	199	1,211	GEOG, GGEO, PHGE	03M, 09, 09M, 09H
History (009)	2,297	1,789	11,777	HI, USHI, WOHI, AMHI, EUHI	09, 09H, 10
Psychology (011)	101	108	949	PS	09, 09H
TITLE 1					
Title I Remedial Math (084)	237	85	2,066	READ	03M, 09, 09M, 09H, 10
Title I Remedial Reading (083)	3,335	798	7,247	MATH	03M, 09, 09M, 09H, 10
VOCATIONAL TECHNICAL PROGRAMS					
Agriculture	**302**	46	435	AG, AGED	
Agricultural Business & Mgt. (101)	95	40	82	ABM	09
Agricultural Mechanization (102)	13	13	62	APM, AGME	09
Agricultural Resources/Conservation (103)	3	12	56	RES, AGRF	09
Agricultural Sciences (104)	82		365	AG	09
Horticulture Services (105)	29	19	73	HO, HOR	09
Orientation to Agriculture (100)	67	46	435	AG, AGED	09
Other Agricultural Occupations (106)	13	46	435	AG, AGED	09
Business, Marketing & Management	**1,382**	153	1,489	BMM, BCTC	
Accounting/Bookkeeping (108)	298	74	865	ACBO, ACC, BOOK, REKE	09
Administrative Assistant/Secretarial (109)	24	3	84	IPS, SPRA	09
Banking & Financial Support (110)	15	74	374	ACC	09
Business Admin. & Management (111)	25	102	503	BB, BCTC, GEBU	09
Business Computer Programming (112)	20	12	81	BCPS	09
Enterprise Management (113)	5				09
Information/Data Processing) (060)	137	75	473	INPR, DAPR	09
Legal Administrative Assistant (114)	4	2	414	IPS, BULA	09
Marketing Operations (115)	16	32	199	MAR, BCTC	09
Medical Administrative Assistant (116)	0				09

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Orientation to Business Occupations (107)	685	96	479	BB GEBU	09
Other Business Occupations (118)	145	202	1,516	BB BUED	09
Product Marketing (117)	8	32	199	MAR BCTC	09
Family & Consumer Sciences	**1,130**	**58**	**113**	FACS, IFRP	
Child Care & Guidance (129)	189	26	75	CDC	09
Clothing & Apparel (130)	94	10	222	FC CLTE	09
Cosmetology (131)	23		0	COSM	09
Custodial/Housekeeping/Home Serv. (132)	9	28	99	IMH	09
Foods Services Occupations (133)	149	19	246	FN FONU	09
Foods Services/Lodging Mgt. (134)	13	19	246	FN FONU	09
Home Furnishings (135)	3	11	129	IFLE HHFE	09
Hospitality (136)	0		0	HTHM	09
Occupation of Homemaking (137)	183	23	956	HEC HMKG	09
Orientn to F&CS/Foods & Nutrition (128)	367	34	37	FACS	09
Other F&CS Occupations (140)	97	26	196	CEHM CERM	09
Social Work (138)	2				09
Teacher Aide (139)	1				
Health Occupations	**72**		238	HEOC	
Clinical Laboratory (120)	0	0			09
Dental Assistant (121)	1	0			09
Medical Office/Assistant (122)	2	0	0	MASS	09
Medical Records (123)	0	0	0	MRT	09
Nursing Assistant/Aide (124)	28	0	0	NU NUR NUPR NSPT NUAS NUSE	09
Nursing Services (125)	13	0	0	NU NUR NUPR NSPT NUAS NUSE	09
Ophthalmic Services (126)	1	0			09
Orientation to Health Occupations (119)	15	0	0	HOO HNO HOPT	09
Other Health Occupations (127)	12	0	0	RT RAD	09
Industrial	**1,558**	**19**	**695**	IA, INED, ITE	
Architectural Drafting (142)	52	17	167	DR DRDE MD	09
Auto/Automotive Body Repair (143)	49	0	30	AURE AUTE ABR	09
Auto/Automotive Mechanic/Techn (144)	181	0	30	AURE AUTE	09
Aviation Systems/Maintenance (145)	5	0	2	TR	09
Building & Property Maintenance (146)	6	11	27	CONS	09
Cabinet Maker/Millworker/Woodwork (147)	129	11	105	CONS WO WOO	09
Carpenter (148)	51	11	105	CONS WO WOO	09
Comm. Systems Installer/Repairer (149)	7	16	67	INTE ELEC	09
Computer Installer/Repair (150)	6				09
Construction (151)	84	11	105	CONS WO WOO	09
Drafting (152)	203	17	40	DRDE	09
Electrical/Electronics Equip Installers/Repairers (043)	97	3	76	ELEC ELEL	09
Graphic & Printing Equip. Operators (154)	33	4	23	GRCO	09
Graphic Design/Commercial Art (153)	73	4	67	GRAR GRCO	09
Heating, AC & Refrigeration (155)	6	0	0	HVAC	09
Machine Shop Assistant (156)	18	5	45	MFG	09
Manufacturing (157)	32	5	45	MFG	09
Mechanical Drafting (158)	28	17	40	DRDE	09
Orientn to Indust. Techn Occupations/General Shop (141)	259	13	52	INTE	09
Other Industrial Occupations (164)	115	13	52	INTE	09
Precision Metal Worker (159)	28	5	45	MFG MEWO	09
Protective Services/Law Enforcement/Fire Fighter (160)	1	0	0	PUSE	09

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Radio & TV Broadcasting (161)	14	0	0	RTV TTP	09
Technical Prep/Engineenng-Related Technologies (162)	46				09
Welding (163)	35	5	45	MFG WE	09
Vocational Technical Miscellaneous	**468**				
Career Awareness and Development (166)	81		n/a		09
Cooperative Vocational Education (056)	371		n/a		09
Specialized Vocational Education (165)	16		n/a		09
Column Totals	125.268				

Definitions:
State [FT]= total of FT personnel by position/teaching assignment
Entitlements= the #- of entitlements, by area, reported between July 1, 1998 and June 30, 1999. [Duplicate counts]
Reserve Pool= the #- of endorsements of educators currently not working (issued between 7/1/79 & 6/30/99) [Duplicate counts]
Endorsements= field codes used to associate supply with teaching assignments
Certificates= all of the certificates that would apply to the teaching assignment [Level Endorsements: M= Middle; H= High School]

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Appendix C: 1998-99 Supply and Demand by Teaching Assignment

MAIN ASSIGNMENT	State [FT]	Total New: Re-Entering	Total New: Beginers	Unfilled Positions		Total Demand		Supply: #-of Entitlements	Supply: Reserve Pool
*Self Contained (055)	40,973	1,234	1,945	543.0	1%	3,722	9%	1,793	98,801
Art (033)	2,439	62	93	53.5	2%	209	9%	331	3,944
At Risk (PreK), (067)	1,271	60	97	n/a		157	12%	592	13,868
Audio Visual (051)	19	1		n/a		1	5%	32	750
Bilingual Education (087)	2009	132	178	34.5	2%	345	17%	38	2,103
Community Education (064)	17		1	0.0	0%	1	6%		
Consumer Education (038)	137	4	2	0.0	0%	6	4%	122	675
Driver Education (037)	628	5	10	0.0	0%	15	2%	59	655
English as a Second Language (059)	525	41	27	4.5	1%	73	14%	40	287
Gifted Education (065)	669	30	17	3.0	0%	50	7%	0	18
Health Education (071)	552	12	25	2.0	0%	39	7%	138	1,563
Learning/Resource Center-Library (057)	461	16	11	16.1	3%	43	9%	32	1,117
Physical Education (036)	6,772	107	260	78.8	1%	446	7%	788	9,554
Reading Improvement (NonTitle I) (085)	756	42	30	4.5	1%	77	10%	85	2,066
Z - Other Subject/Program Not Listed (047)	3,619	206	193	52.2	1%	451	12%		
COMPUTER EDUCATION/TECHNOLOGY	**1,309**	**43**	**44**	**11.0**	**1%**	**87**	**7%**	**43**	**443**
Computer Literacy/Technology (093)	1,145	39	38	n/a		77	7%	31	362
Computer Programming (094)	164	4	6	n/a		10	6%	43	443
ENGLISH									
Business English (028)	87	2	2	n/a		4	5%	699	7,286
Dramatics (005)	97	2	2	n/a		4	4%	127	1,199
English (001)	5,062	139	246	18.5	0%	404	8%	699	7,022
Journalism (004)	42		2	1.0	2%	3	7%	35	275
Language Arts (058)	2,927	112	200	n/a		312	11%	1,976	23,462
Other English (006)	282	4	8	n/a		12	4%	0	1
Reading (002)	801	36	32	1.0	0%	69	9%	85	2,066
Speech (003)**	209	6	7	1.9	1%	15	7%	244	2,360
FOREIGN LANGUAGE									
French (022)	469	15	13	1.5	0%	30	6%	99	1,732
German (023)	167	5	6	0.0	0%	11	7%	22	726
Japanese (068)	5			1.0	13%	1	20%	2	37
Latin (024)	36		1	0.8	2%	2	5%	9	153
Other Foreign Language (026)	98	6	9	n/a		15	15%	27	210
Russian (069)	6			0.0	0%	0	0%	8	105
Spanish (025)	1,617	69	83	13.9	1%	166	10%	394	2,986
MATHEMATICS									
Algebra (018)	1,949	47	83	0.0	0%	130	7%	798	7,247
Basic and/or General Math (088)	2,967	92	161	26.8	1%	280	9%	798	7,247
Business Math (027)	82	5	4	n/a		9	11%	96	778
Geometry (019)	536	10	16	0.0	0%	26	5%	798	7,247
NonTitle I Remedial Math (086)	20		1	0.0	0%	1	5%	798	7,247
Other Math (021)	924	21	24	1.0	0%	46	5%	798	7,247
Trigonometry (020)	80			n/a				798	7,247
MUSIC								281	4,926
Instrumental Music (035)	1,517	64	74	n/a		138	9%	7	222
Vocal Music (034)	2,158	81	99	n/a		180	8%	9	247
NATURAL SCIENCE									
Biology (014)	1,450	28	95	7.5	1%	131	9%	547	3,530
Chemistry (015)	791	15	27	3.0	0%	45	6%	232	1,590
Earth Science (048)	288	5	14	0.0	0%	19	7%	20	219

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General Science (013)	2,537	61	151	n/a		212	8%	771	7,136
Other Science (017)	308	13	17	n/a		30	10%	496	3,320
Physical Science (049)	325	6	20	2.0	1%	28	9%	219	2,371
Physics (016)	382	14	18	3.0	1%	35	9%	152	1,052
SPECIAL EDUCATION									
Adapted P.E. (096)	115	6	4	2.0	2%	12	10%	788	9,554
Behavior Disordered (078)	2,242	161	132	101.5	4%	395	18%	517	6,162
Cross Categorical (097)	3,093	180	153	83.0	3%	416	13%		
Deaf (073)	374	21	15	0.0	0%	36	10%	45	1,000
Early Childhood (074)	1,053	58	46	25.0	2%	129	12%	0	0
Educationally Handicapped (075)	88	4	5	14.0	15%	23	26%	517	6,162
EMH (072)	1,213	41	34	9.0	1%	84	7%	183	5,173
Hard of Hearing (098)	273	16	8	5.9	2%	30	11%	45	1,000
Homebound/Hospital (099)	32			n/a			0%		
Learning Disabled (076)	6,855	321	304	60.0	1%	685	10%	736	8,631
Multiply Handicapped (082)	182	6	10	n/a		16	9%		
Other/General Special Education (050)	1,616	66	61	115.1	7%	242	15%		
Physically Handicapped (077)	283	15	5	56.0	19%	76	27%	4	565
Severe/Profound Mentally Handicap. (089)	218	10	9	12.0	5%	31	14%	78	2,358
Speech and Language Impaired (079)	2,235	108	126	136.4	5%	370	17%	224	2,363
TMH (080)	763	32	25	5.0	1%	62	8%	78	2,358
Visually Impaired (081)	262	10	7	10.0	3%	27	10%		293
SOCIAL SCIENCE									
Civics (007)	172	5	7	0.0	0%	12	7%	373	2,410
Economics (010)	69		3	0.0	0%	3	4%	238	1,918
General &/or Other Social Studies (012)	2,556	57	159	0.0	0%	216	8%	2,819	30,462
Geography (008)	311	5	11	0.0	0%	16	5%	199	1,211
History (009)	2,297	41	103	1.0	0%	145	6%	1,789	11,777
Psychology (011)	101		6	0.6	1%	7	7%	108	949
TITLE 1									
Title I Remedial Math (084)	237	7	7	0.0	0%	14	6%	85	2,066
Title I Remedial Reading (083)	3,335	130	135	1.0	0%	266	8%	798	7,247
VOCATIONAL TECHNICAL PROGRAMS									
Agriculture	**302**	**7**	**12**	**0.5**		**19**	**6%**	**46**	**435**
Agricultural Business & Mgt. (101)	95	3	3	n/a		6	6%	40	82
Agricultural Mechanization (102)	13			n/a				13	62
Agricultural Resources/Conservation (103)	3			n/a				12	56
Agricultural Sciences (104)	82	2	4	n/a		6	7%		365
Horticulture Services (105)	29	1	0	n/a		1	3%	19	73
Orientation to Agriculture (100)	67	1	5	n/a		6	9%	46	435
Other Agricultural Occupations (106)	13			n/a				46	435
Business, Marketing & Management	**1,382**	**28**	**37**	**25.2**		**65**	**5%**	**153**	**1,480**
Accounting/Bookkeeping (108)	298	4	10	n/a		14	5%	74	865
Administrative Assistant/Secretarial (109)	24			n/a				3	84
Banking & Financial Support (110)	15		1	n/a		1	7%	74	374
Business Admin. & Management (111)	25		2	n/a		2	8%	102	503
Business Computer Programming (112)	20	1		n/a		1	5%	12	81
Enterprise Management (113)	5	1		n/a		1	20%		
Information/Data Processing) (060)	137	3	7	n/a		10	7%	75	473
Legal Administrative Assistant (114)	4			n/a				2	414
Marketing Operations (115)	16			n/a				32	199
Medical Administrative Assistant (116)	0			n/a					
Orientation to Business Occupations (107)	685	14	15	n/a		29	4%	96	479
Other Business Occupations (118)	145	5	2	n/a		7	5%	202	1,516

Product Marketing (117)	8			n/a				32	199
Family & Consumer Sciences	**1,130**	**23**	**24**	**6.0**		**47**	**4%**	**58**	**113**
Child Care & Guidance (129)	189	2	6	n/a		8	4%	26	75
Clothing & Apparel (130)	94	1	1	n/a		2	2%	10	222
Cosmetology (131)	23	1	1	n/a		2	9%		0
Custodial/Housekeeping/Home Serv. (132)	9			n/a				28	99
Foods Services Occupations (133)	149	2	2	n/a		4	3%	19	246
Foods Services/Lodging Mgt. (134)	13	1	1	n/a		2	15%	19	246
Home Furnishings (135)	3	1		n/a		1	33%	11	129
Hospitality (136)	0			n/a					0
Occupation of Homemaking (137)	183	7	3	n/a		10	5%	23	956
Orientn to F&CS/Foods & Nutrition (128)	367	5	7	n/a		12	3%	34	37
Other F&CS Occupations (140)	97	3	1	n/a		4	4%	26	196
Social Work (138)	2		2	n/a		2	100%		
Teacher Aide (139)	1			n/a					
Health Occupations	**72**	**4**	**7**	**0.0**		**11**	**15%**		**238**
Clinical Laboratory (120)	0			n/a				0	
Dental Assistant (121)	1	1		n/a		1	100%	0	
Medical Office/Assistant (122)	2		1	n/a		1	50%	0	0
Medical Records (123)	0			n/a				0	0
Nursing Assistant/Aide (124)	28	2	1	n/a		3	11%	0	0
Nursing Services (125)	13		1	n/a		1	8%	0	0
Ophthalmic Services (126)	1			n/a				0	
Orientation to Health Occupations (119)	15		3	n/a		3	20%	0	0
Other Health Occupations (127)	12	1	1	n/a		2	17%	0	0
Industrial	**1,558**	**32**	**41**	**24.0**	**1%**	**75**	**5%**	**19**	**695**
Architectural Drafting (142)	52		3	n/a		3	6%	17	167
Auto/Automotive Body Repair (143)	49			n/a				0	30
Auto/Automotive Mechanic/Techn (144)	181	3	3	n/a		6	3%	0	30
Aviation Systems/Maintenance (145)	5			n/a				0	2
Building & Property Maintenance (146)	6		1	n/a		1	17%	11	27
Cabinet Maker/Millworker/Woodwork (147)	129	3	1	n/a		4	3%	11	105
Carpenter (148)	51	2	1	n/a		3	6%	11	105
Comm. Systems Installer/Repairer (149)	7	2	1	n/a		3	43%	16	67
Computer Installer/Repair (150)	6	1		n/a		1	17%		
Construction (151)	84	1	4	n/a		5	6%	11	105
Drafting (152)	203	5	2	n/a		7	3%	17	40
Electrical/Electronics Equip Installers/Repairers (043)	97	2	2	n/a		4	4%	3	76
Graphic & Printing Equip. Operators (154)	33			n/a				4	23
Graphic Design/Commercial Art (153)	73	1	3	n/a		4	5%	4	67
Heating, AC & Refrigeration (155)	6			n/a				0	0
Machine Shop Assistant (156)	18		1	n/a		1	6%	5	45
Manufacturing (157)	32		2	n/a		2	6%	5	45
Mechanical Drafting (158)	28	1		n/a		1	4%	17	40
Orientn to Indust. Techn Occupations/General Shop (141)	259	7	8	n/a		15	6%	13	52
Other Industrial Occupations (164)	115		3	n/a		5	4%	13	52
Precision Metal Worker (159)	28		1	n/a		1	4%	5	45
Protective Services/Law Enforcement/Fire Fighter (160)	1			n/a				0	0
Radio & TV Broadcasting (161)	14		1	n/a		1	7%	0	0
Technical Prep/Engineering-Related Technologies (162)	46	3	3	n/a		6	13%		
Welding (163)	35	1	1	n/a		2	6%	5	45

Vocational Technical Miscellaneous	**468**	**14**	**15**	**n/a**	**29**	**6%**	
Career Awareness and Development (166)	81	6	6	n/a	**12**	15%	n/a
Cooperative Vocational Education (056)	371	8	9	0.0	**17**	5%	n/a
Specialized Vocational Education (165)	16			n/a			n/a
Column Totals	125,268	4,263	5,859	1,584	1% **11,706**	**9.3%**	

Definitions:

State [FT]= total of FT personnel by position/teaching assignment.

Total New= number of Re-entries + number of Beginners.

Re-entry= has prior teaching experience but didn't teach in IL the prior year (i.e.1997-98).

Beginner= teaching experience is less than or equal to 1 year.

Unfilled Positions= number of FTE positions reported unfilled as of Dec. 1998.

Total Demand= Total New + Unfilled Positions.

Entitlements= the number of entitlements reported between July 1, 1998 and June 30, 1999. [Duplicate counts]

Reserve Pool= the number of endorsements of educators currently not working (issued between July 1, 1979 and June 30, 199